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Dr. Frank Smithies

A CHICAGO physician was installed as president of the American College of Physicians at its meeting in Cleveland, Ohio, in February, 1927.

Frank Smithies was born in Elland, Yorkshire, England, December 21, 1880, being the son of John and Alice (Tattersall) Smithies.

He came to the United States while still quite a young lad and attended the Calumet High School, Chicago. After that he entered the arts department of the University of Michigan and later the medical department, from which he was graduated as a Doctor of Medicine, in 1904.

He began his teaching career at once, becoming assistant in the clinical laboratory at his Alma Mater immediately after graduation. After about a year he was made an assistant in Medicine at Rush Medical College, Chicago, and held that position for two years.

Desiring to see the work of some of the European teachers, he took the post of assistant in pathology, University of Berlin, for nine months, from which he returned to become instructor in medicine and demonstrator of Clinical Medicine in the University of Michigan. Here he stayed until 1909, in which year he was married to Miss Louise Kellam, of Topeka, Kans.

In 1910 he went to the Mayo Clinic as an assistant in one of the sections on medicine and in charge of the gastroenterologic laboratory, in which posts he functioned for three years.

With this training to his credit, he obtained a number of important hospital connections upon his return to Chicago, late in 1913, and has added to the list in later years.

In 1917, Dr. Smithies was made associate professor of medicine in the School of Medicine of the Universty of Illinois and was advanced to the professorship in 1922.

Having a physical disability which prevented his doing active duty during the War, he "did his bit" as a consultant in Medicine, U. S. Public Health Service, secretary and consulting internist of Medical Advisory Board 3B, Chicago, and Medical Member of the Illinois Draft Advisory Board.

Dr. Smithies is a member of a list of medical societies which covers practically every branch of internal medicine and he takes an active part in many of them. He has been an especially enthusiastic and energetic worker in the American College of Physicians, of which organization he was Secretary-General in 1925, so that his election to the presidency of the College was a

merited reward for valuable service rendered.

The doctor has been a prolific contributor to medical literature. He is the author of a work on Cancer of the Stomach, which appeared in 1916; wrote various sections in the Quarterly Medical Clinics, Ochsner's System of Surgery and other well-known textbooks; and has a list of nearly 100 articles in the current periodicals to his credit.

For a number of years, Dr. Smithies has devoted most of his time to the consideration of problems in gastroenterology and he practices solely as a consultant in internal medicine.

The more highly educated a man is, the more symbolically he sees life. Life, for the cultured man, is always suggestive.—C. Jinarajadasa.

COCAINE, PROCAINE AND BUTYN

Cocaine is an alkaloid from the leaves of *Erythroxylon coca*. It is a bitter, crystalline substance and is generally used in medicine in the form of its salts, particularly the hydrochloride.

When taken by mouth, hypodermically or by application to the mucous membranes it produces, in many persons, a sense of mental and physical exhilaration and pleasure, which is the basis of its well-known habit forming properties.

Physiologic action. — In moderate doses cocaine has no effect upon the *circulation* or the temperature. It is a powerful *respiratory stimulant*, but kills by respiratory failure. Some of it is eliminated by the kidneys, accompanied by an increase in the quantity of urine and a decrease in nitrogenous elimination. Most of it is *oxidized* and destroyed in the body.

The dominant therapeutic action of cocaine is to *paralyze the peripheral sensory nerves*, whether applied to the nerve trunk or the nerve endings.

In the *eye* it causes rather prompt anesthesia of the conjunctiva, accompanied by widening of the palpebral fissure (making the eyeball appear more prominent) and dilatation of the pupil. This pupillary dilatation is *not* accompanied by paralysis of accommodation, as is that produced by atropine, and is not sufficiently forcible to warrant its use in iritis, to prevent adhesions.

When applied locally to any of the mucous membranes, it causes a temporary ischemia, followed by congestion and drying of the tissues, especially in the eye.

Poisoning.—It should be carefully noted that many persons have an *idiosyncrasy* to cocaine, so that they show serious symptoms following very small doses which would be entirely harmless to others. It should, therefore, always be used cautiously.

The symptoms of an overdose are: nervousness, rapid pulse, increased reflexes, deepened respiration and vertigo. Later nausea and vomiting occur and sometimes epileptiform convulsions. The pupils become markedly dilated and sight and speech may be lost. Death occurs, usually in convulsions, from cardiac and respiratory failure.

The *antidotes* are ammonia, caffeine (or strong coffee) and strychnine, if the symptoms are predominantly depressive. In the *convulsive* cases, Tatum and Collins have shown that the best treatment is the intravenous injection of *barbital sodium*, combined with paraldehyde, in doses sufficient to control the symptoms of cortical stimulation *completely*. It is believed that the administration of these drugs prior to the use of cocaine will minimize the danger of poisoning.

Therapeutic Uses.—At the present time, practically the only use made of cocaine is as a *local anesthetic*. In spite of its drying effect on the conjuctiva and cornea, it is still widely used in operations on the *eye* in solutions of 1 to 4 percent. It is also employed topically, as a preliminary to infiltration with procaine, in *operations* on the nose and throat. A 4- or 5-percent solution is generally used for this purpose.

In some cases of *cracked nipples, stomatitis, pharyngitis* and other conditions where superficial, localized pain is a prominent feature, its use is, at times, justified, but it can generally be replaced by the milder and relatively harmless local anesthetics, such as butesin.

Since the introduction of procaine, it is rarely used for anesthesia by injection, as it is no more effective and is much more dangerous. If it is to be injected, its effects are prolonged and the danger of systemic effects diminished by combining it with small quantities of *epinephrin*.

Cocaine itself is soluble in oils, but its salts are not. If anesthetic ointments are to be prescribed, the alkaloid should be used.

Procaine

Procaine (sometimes known by the German proprietary name of novocaine) is the hydrochloride of para-amino benzoyl, diethylamino ethanol. It is readily soluble in water and is not damaged by *boiling*, though

it should be remembered that, after epinephrin has been added, the mixture cannot be boiled without impairing the effect of the latter drug.

Its *paralyzant effects* on the sensory nerves are identical with those of cocaine, except in degree. It is not so irritant in its effects as is cocaine and may be used in the eye without producing mydriasis or drying of the tissues. There is no tendency to *after-pain* or tissue necrosis following its use. It is *incompatible* with chloride of zinc, alkalies, tannic acid, calomel, the bichromate and permanganate of potash, salts of silver and the arsenicals.

It is about *one-seventh as toxic* as cocaine. Its toxicity, however, depends directly on the *rate* at which it is absorbed. When absorption takes place slowly the liver rapidly destroys it and it is almost nontoxic; if introduced into the system rapidly it is decidedly more poisonous. The strength of the solution, too, has a decided effect on toxicity, weak solutions being relatively, considerably less dangerous. The addition of small quantities of *epinephrin* still further reduces the toxicity.

Allen states that, under proper precautions, he has never observed toxic symptoms from its use, and Babcock has injected as much as 385 cc. of a 1-percent solution (3.85 Gm. of the drug) without unpleasant results. As a rule, however, not more than 1.25 Gm. (8 ounces of a ½-percent or 4 ounces of a 1-percent solution) should be injected for one operation. All powerful drugs have potentialities of danger when used carelessly, and procaine is no exception.

Therapeutic uses.—The sole use of procaine is for producing *local anesthesia.* It is the drug of choice for anesthesia by *infiltration, nerve blocking* or intradural injection (*spinal anesthesia*). For topical application it is inferior to cocaine or butyn, but it works satisfactorily, in some cases, in the eye, nose and urethra, for which purpose it is used in strengths of from 2 to 10 percent. The addition of one part of sodium bicarbonate to each 4 parts of procaine in the solution will greatly increase its topical effect.

For the various types of anesthesia by injection, procaine is used in solution of ¼ to 1 percent and sometimes stronger (a 10-percent solution may be injected without causing irritation), almost always in combination with small quantities of epinephrin (3 drops of a 1:1000 solution to each 5 cc. of procaine solution). Its action is more markedly enhanced by this addition than is that of any of the other local anesthetics. The full technic of local and regional anesthesia will be found in CLINICAL MEDICINE for April, 1926, on page 225.

Butyn

Butyn is a normal sulphate of a base resembling that of procaine, but with a butyl group in place of the ethyl group and a propanol group in place of the ethanol group. It is odorless, somewhat bitter and readily soluble in water, the solutions being *boilable* without impairment.

Butyn is rapidly replacing cocaine, in the practice of those who are familiar with its use, because it has been found to be superior to the latter drug, for all topical applications, in the following respects: It is more powerful than cocaine, weaker solutions being equally efficient in anesthetic power; it acts more rapidly and the effect is more prolonged; in the doses used, it is less toxic than cocaine (though, grain for grain, the toxicity is about equal); it does not dry the tissues nor dilate the pupil; and it causes no ischemia or shrinking of the tissues. It combines well with epinephrin, as do cocaine and procaine, but is precipitated if added to salt solutions in the higher strengths.

Therapeutic Uses.—For all *topical* anesthesia, especially in the *eye, nose* and *throat,* butyn is the drug of choice, for the reasons just mentioned. For eye work a 2-percent solution is generally used, and 4 instillations, 3 minutes apart, will produce sufficiently profound anesthesia for all ordinary eye operations, such as iridectomy. Even weaker solutions have been used by many with entire satisfaction.

In the nose and throat, two or three swabbings with a 2-percent solution, at intervals, will, in about 10 minutes, give sufficient anesthesia for the simpler and shorter operations. A few drops of a 1- to 2-percent solution will render *instrumentation of the urethra* painless.

While the superiority of butyn for topical anesthesia is rather generally recognized, the fact that it is coming into wide use for *infiltration anesthesia* may not be so well known. Many experienced surgeons prefer it for this class of work because of the very prompt and prolonged effect which it produces and because there are less unpleasant symptoms.

An otolaryngologist who has used butyn

in many thousands of tonsillectomies and has experimented with various strengths and various technics, recommends, for injection, ¼-percent in physiologic saline solution (though, theoretically, this is a precipitant, and its general use is not recommended), with 2 drops of 1:1000 epinephrin to the dram. He has the patient gargle with isotonic salt solution, to rid the throat of mucus, and then sprays the pharynx, tonsils and pillars with a 5-percent butyn solution. Following this he injects the right tonsil; then the left; and immediately starts work on the right tonsil.

This drug has been widely used as an anesthetic in dentistry and is becoming increasingly popular for that purpose.

It should be borne in mind that, when used about the head, pharynx, urethra and sacral canal, *all* local anesthetics are more dangerous than when employed in other parts of the body, and in these fields, weaker solutions and greater precautions should be employed. At present, the use of butyn for spinal and sacral anesthesia is not urged, as procaine is satisfactory and is known to be safe, if properly handled.

A number of men who are doing work with *surgical diathermy* speak very highly of butyn as an anesthetic. They use a 2-percent solution, topically, to mucous surfaces, and inject ½- to 1-percent solutions, subcutaneously, when operating on skin surfaces.

Want of practice makes science a poison; indigestion makes food a poison.—Sanskrit Proverb.

THE TRAINING CAMPS

One of the arguments that used to be advanced, years ago, by the opponents of woman suffrage, was that women should not be allowed to vote because they could not bear arms in defense of their country. During the War, thousands of women demonstrated that there were many things they *can* do—as well or better than can the men—to further the success of military undertakings, but our actual soldiers, in time of need, must come from our adult male population.

We all hope and pray that there will be no more wars, in spite of the chaotic conditions in China and Mexico.

We all hope and pray that we will not die until we have amassed a sufficient amount of money so that the comfort of our families is assured—but wise men prepare for emergencies by purchasing all the life insurance they can conveniently carry.

Gene Tunney did not become heavyweight champion of the world by *hoping* that he might overcome Dempsey, nor did Gertrude Ederle swim the English Channel by *wishing* that she might be able to do so. No one ever accomplished anything worth while without *preparing* for what was to be done, *before* he began to do it.

No one wants war, any more than he wants to die; but preparedness for a national emergency by military training is as wise and necessary an act as is preparing for a personal emergency by buying life insurance.

Everyone wants to be successful in what he undertakes; but no thinking man believes that this success can come, in the ordinary affairs of life, without thoughtful preparation for the event. Patriotism and high-sounding words will not protect against shrapnel and lethal gases.

Almost every able-bodied physician in the land served his Country in the months of conflict and, down in his heart, knows himself to be a better man for having done so. Many are "carrying on" by holding their commissions in the Reserve Corps and keeping in touch with military matters. ALL *ought* to be doing so.

Physicians are centers of the best and most progressive thought in their communities (or ought to be). Are *you* planning to send your boy to the Citizens Training Camp this summer? or, if he belongs to an R.O.T.C. unit at his school, are you encouraging him and planning to visit him while he is in camp? If not, why not?

Every normal adolescent male has in him an instinct for things military. Why not turn that urge into useful channels by seeing that he has a chance to acquire sound fundamentals of citizenship, a measure of self discipline and a wholesome respect for authority—and, incidentally, some knowledge of what would be required of him in time of war—by sending him to one of the Training Camps where he can receive such training, as well as a wholesome outing, at Government expense.

Every boy who is old enough to be eligible ought to go to these camps and ought to feel it a duty and a privilege to go. Here is one way in which he can prepare to protect the girl he loves in a way in which she cannot protect herself and, if he has been properly instructed, he will jump at the chance.

All physicians should be encouraging—urging—young men to take advantage of these opportunities, and should be setting the example by themselves holding or getting reserve commissions and going to camp in the summer if it is at all possible to do so.

If a man knows not to what port he is steering, no wind is favorable to him.—*Seneca.*

ARGYRIA

Years ago, when silver nitrate was rather widely used, internally, in the treatment of epilepsy, tabes and certain cases of gastritis, the occurrence of generalized argyria was not so very uncommon, and localized, permanent staining of the skin occurs rather commonly in persons who are constantly handling the salts of silver and occasionally where silver salts have been used upon open wounds.

Argyria resulting from the organic or colloidal preparations of silver is very rare, only a few cases having been reported. It comes on when these solutions have been used daily in the nose, throat, urethra or other mucous membranes for long periods of time—six months to a year or more.

The characteristic feature of the disease—or condition—is the gradual appearance of a slaty- or greenish-gray discoloration of the skin of the whole body, rather closely resembling cyanosis, due to the depositing in the lower layers of the skin of some complex silver compound whose exact nature is still unknown. The deposits are brown but appear gray when seen through the upper layers of the skin. There are no constitutional symptoms and the patients seek relief solely from the disfigurement.

Until rather recently the hope of ameliorating this condition has been considered to be very slight; but in 1914, Crispin[1], while treating a patient with argyria gave several doses of *methenamin* (hexamethylenamin) for an intercurrent coryza and was surprised to note that the discloration faded markedly. In 1927, Olson[2] reported a similar result. This form of treatment has not been further confirmed, because of the scarcity of cases, but is harmless, inexpensive and worthy of a trial in this condition. The dose is 5 to 10 grains, 3 times a day, continued over weeks or months, with rest periods between if gastric irritation appears.

Post has recommended sodium or potassium iodide in doses of 5 to 10 grains or more, three times a day, over considerable periods.

There is a natural tendency for the discoloration to fade as time goes on, and these patients have cleared up, after years, without any treatment whatever.

The best treatment is prevention. The organic and inorganic salts of silver are powerful remedies and, even though untoward results are rare, it is safer not to use them regularly over very long periods nor to apply them to open lesions of the skin nor under pressure.

These rare cases of argyria need discourage no one from using the colloidal silver preparations, which are now indispensable to rhinologists and all who treat the mucous membranes, but they should lead to a degree of thoughtful care to obviate this unusual but decidedly distressing condition.

1.—Crispin, A. M.: Argyrism Following the use of Collargol. *J.A.M.A.*, May 2, 1924, p. 1394.
2.—Olson, G. M.: Argyria Localis due to Organic Silver Preparations. *J.A.M.A.*, July 14, 1917, p. 87.

The patient who gets services for nothing values them accordingly.—*Urologic and Cutaneous Review.*

OBESITY, WALKING AND AUTOMOBILES

A friend of ours remarked, the other day, that he considered the automobile the greatest curse of the twentieth century. Of course, we argued that point with him, forcibly and at some length, but down in our hearts we knew that *some* of his points were incontrovertible, and so we laid special stress upon the services of the motor car to business and commerce and in the broadening of human lives. We both still believe we are right!

One point he did not stress so strongly as he might (and we refrained from stressing it just then, for the sake of the argument) was that the automobile is robbing the American people of the use of their God-given legs, and thereby furnishing no mean factor toward the prevalence of obesity, diabetes and high blood-pressure.

It may be that the automobile is contributing to the delinquency of our sons and daughters by facilitating "petting parties" and the pernicious activities of the hip flask. Personally, we feel that a proper upbringing and a sympathetic and helpful home environment are adequate prophylactics against such social diseases. But it is perfectly sure that our youngsters are "taking out the car" to go a couple of blocks, when they ought to be *walking;*

and, no matter how sane and wise we are about most things, we, as a matter of fact, are setting them a bad example in this particular, for, except a few pedestrian enthusiasts, America is taking its out-door recreations, big and little, on wheels.

It has been demonstrated, over and over again, that the man who permits himself to carry a load of excess fat is thereby shortening his life. The adipose tissue does not confine itself to the rotundity of his paunch, but trickles in among his muscles and his vital organs, interfering seriously with their functioning. Diabetes and "heart disease" are far more common and more fatal in the obsese; and there are cases of hypertension which are due to nothing but corpulence and which are cured by a return to normal weight.

For the youngsters, this thing of riding everywhere they go is bad enough, but they usually get some exercise in other ways, by dancing, swimming, skating, gymnasium work or like activities, and they can stand the strain of the more concentrated and violent exertion.

We folk who have—well—passed the first glow of youth, are not so fortunately situated, as a rule. If we have been exercising *regularly* and *sanely* since our college days, all is probably well, but if we haven't, a long day of golf or hill climbing may play havoc with our fatty hearts and sluggish livers. We can not stand the orgies of physical expenditure in which we gloried when we were adolescents.

For the average professional man, the wisest and most salutary form of exercise is *walking*. We do not mean a 20-mile hike two or three times a year, with a week in bed for recovery each time, but three to five or six miles or ordinary, brisk, heel-and-toe work, *every day*—365 days in every year, unless prevented by illness.

That is not so hard as it sounds. If we will walk about our town calls, for part of the day at least, or walk to and from the train, at house and office, and then, if necessary, fill in with a mile or two before going to bed, we can do the trick almost without noticing it.

An then, on Sundays, if we will do five or six miles, afoot and through the fields, we will see and *savor* a lot more of God's world and the living beings in it than we will in fifty or sixty miles of dashing along concrete roads with a million other creatures who have eyes for no objects but the speedometer and the gasoline indicator.

This is a splendid time of year to acquire the walking habit. The growing of the leaves, the opening of the flowers, the courtship and nest-building of the birds offer a surprising amount of wholesome and joyous excitement to the man who has eyes to see and ears to hear. Even in the city there are grass and shrubs and sparrows and *people* to watch and study; for, in the springtime, even the drabbest specimens of humanity take on a little freshness which stimulates one's interest, and once this interest is truly aroused it will keep awake by itself.

Cut a little off the budget for gas and oil and tires and add it in the column where you include the purchase of shoe leather. Cut a little off the expenses for caviar and lobster and duck soup and bootleg hootch and switch to cornbread and spinach and carrots and buttermilk for a while. By so doing you will cut a little off your equatorial circumference and add a little to your life expectancy.

And not only will walking help you to live *longer;* it will help you to live *more* and *better,* as well.

REGULATING THE IRREGULARS

The medical profession is now squarely faced by the problem of what is to be done in the matter of the irregulars—those who, with an incomplete medical education or none at all, announce their readiness and presumed ability to treat sick people with satisfactory results.

There are a great many healing cults at present, but most of them are so small in numbers and so lacking in influence that they are practically negligible. But they are increasing at a rapid rate. Statistics show an increase of 116 percent in the number of "healers", other than physicians and osteopaths, between 1910 and 1920. Among these latter are the naprapaths (who believe that all disease is due to pressure on the medulla oblongata and that manipulation of the nape of the neck is all that is needed to restore normality), the physiomedics, the naturopaths and a host of others.

Three systems of nonmedical healing have, however, gained such numerical force and importance that they must enter into our considerations. These are: Chiropractic, Osteopathy and Christian Science.

Chiropractic ridicules and repudiates the value of the laboratory in the diagnosis of disease and states that a knowledge of chem-

istry, bacteriology, pathology, etc., is wholly unnecessary, because all disease is caused by pressure on one or more of the spinal nerves, and that relief of this pressure by "adjustment" of the vertebrae will cure all cases. The more intelligent chiropractors do not attempt to handle obstetric cases or to treat wounds causing hemorrhage or advanced cases of cancer, tuberculosis, syphilis and similar diseases. There seem to be few or no requirements for admission to their schools, other than the possession of the cash to pay tuition fees, and we never have heard of a student who did pay his fees who was refused a "diploma".

Osteopathy is a good deal more substantial. The better schools have certain educational requirements for admission and give a four-year course of instruction which includes anatomy, physiology, physical diagnosis and other fundamental matters. The basis of their teaching is, in the words of Dr. Still, the founder, that "the body is an intricate machine which, if kept in proper adjustment, nourished and well cared for, will run smoothly to a ripe old age." They believe that all disease is caused by interference with the blood and nerve supply (usually the result of displacement of some of the body's parts or organs) and that restoration of proper physical relations, by manipulation, will cure the disease condition.

Some osteopaths are capable men and do not hesitate to call for the help of specialists when they find themselves out of their depth. Most states now license them to practice almost on a par with medical graduates and, if a community has no physician at all, it is reasonable to believe that an osteopath might render valuable service.

Both of these irregular schools of practice are now recommending the use of the various apparatus for physical therapy treatments, and their practitioners, lacking basic understanding of scientific principles, may do great harm with these powerful machines.

Christian Science is something quite different. It utterly denies the reality of all physical things, including the human body, and maintains that by a persistent refusal to admit the actuality of aches and pains and of all disease states whatsoever these will depart and be no more.

Qualification to practice this system of healing is, naturally, based wholly upon spirtual attainments, as to permit the study of pathology and like subjects would negative the whole teaching.

This philosophy or religion may prove wholly adequate to meet all requirements when the race has developed to that high point where the physical body and its needs and conditions become negligible. That state has not, however, been reached by most of us. Meantime, Christian Science treatments continue to relieve many disorders of psychic origin and to aid in the recovery of patients with organic diseases by promoting cheerfulness and hope.

The most serious dangers from all of the irregulars are that infectious diseases may spread or become epidemic, under their ministrations, for lack of recognition and proper attention; and that patients suffering from serious disorders which are amenable to treatment in their early stages, may be permitted to progress to the point of hopelessness because of the false encouragement given them.

A questionnaire sent out to a large number of physicians some months ago contained two questions: What healing cult is now most inimical to the community and to the medical profession? and, What shall be done about it? More than a thousand replies were received.

In answer to the first question, 710 considered chiropractic to be the greatest menace to the common welfare and that of physicians; 176 had the same feeling about Christian Science; 67 incriminated osteopathy most heavily; and only 49 mentioned all the other cults together in this connection.

As to the remedy, the overwhelming opinion was in favor of educational methods. Education of the public regarding the facts of health and its maintenance and disease and its relief was proposed by 361; 375 favored the use of the press and other agencies to spread information regarding the cults and their methods; 59 suggested that if the physicians made *themselves* more efficient they would have little to fear; a deeper study of physical therapy by doctors interested 20, and heartier cooperation among medical men appealed to 18; 64 thought best to ignore the irregulars altogether and let the public learn the truth by bitter experience; while 93 were in favor of vigorous regulatory laws and active prosecution of offenders. Truly, an interesting list!

In the *A. M. A. Bulletin* for January, 1927, Dr. W. C. Woodward, of the Bureau

of Legal Medicine and Legislation of the A.M.A., made a very reasonable suggestion. He recognized that many of these schools of practice are so firmly establishhed, especially in politics, that they can never be forcibly eliminated, but also maintained that, either they are a menace to public health or the qualifications required of physicians are unnecessarily rigid. If it is necessary for a doctor of medicine to be qualified in the basic sciences—anatomy, physiology, chemistry, bacteriology, pathology, diagnosis and hygiene—it ought to be necessary for *everyone* who proposes to treat the sick to be similarly qualified.

The suggestion of Dr. Woodward is, briefly, the general adoption of such *Basic Science Acts* as those already passed by Connecticut and Wisconsin. The gist of these acts is the recognition that a knowledge of these basic sciences, by everyone who purposes to practice the healing art, is necessary to public safety and the insistence upon examinations in these subjects by a *nonprofessional* board of unbiased *scientists*, to be followed, if passed satisfactorily, by an examination by a *professional* board, in order to determine the candidate's fitness to practice the particular method of healing professed by him.

This sounds like a valid and reasonable suggestion from the regulatory standpoint, and we suggest that it be talked over in medical societies and, if found worthy of approval, that steps be taken looking toward the adoption of such laws in all states.

While doing this worthy work, we should not, however, forget the consensus of opinion as shown by the replies to the questionnaire. We should be using every opportunity and every means to acquaint the people of our communities with *the truth* regarding human health and disease.

In doing this, we must be very careful to refrain from intemperate and slanderous remarks about those who think differently from us. Such statements will arouse the suspicion of professional jealousy. We must be prepared to tell our patients and other people, calmly and simply, just *why* naprapathy, chiropractic, *et id genus omne* are inadequate to the situation and dangerous to individual and public health. Blustering denunciations will be worse than useless.

This whole matter is bound up with the complicated and controversial questions of medical education, but the more freely and frankly we talk these things over among ourselves and think them through, individually, the sooner will the much-desired solution emerge.

Leading Articles

Transactions of The First International Congress of Sexual Research*

(A Series of Abstracts)

By HARRY BENJAMIN, M.D., New York,
and CURT THOMALLA, M.D., Berlin, Germany

Introduction

By Dr. Curt Thomalla

TWO decades ago sexology was not officially recognized, and textbooks of medicine made no reference whatever to sexual life and the part played by sexuality in health and disease. In 1913, the International Society for Sexual Research was founded. It was proposed to call its first Congress in 1914. This socalled "Ingese", whose chairman is Dr. Albert Moll, survived the storms of war and the acrimonious boycott by the world of science sufficiently to become revitalized, at the suggestions of three German scholars, and to call together its Congress, in 1926.

Dr. A. Moll, Berlin, President of the Congress

The Congress of 1926 lasted a week, and the reception which took place on Sunday, October 10, in the parliamentary hall of the Reichstag building, gave everyone the impression of being present at a highly serious and representative gathering, which would creditably reflect upon the standing of German science. It was gratifying to have the international character of the congress emphasized, not by a few representatives from small states but the eminent and authoritative scholars from all prominent countries. Delegates from Austria, England, Bulgaria, Danzig, Estland, the United States of America, Finland, France, Greece, Italy, Spain, Roumania, Russia, Norway and other countries were present.

The congress professed no missionary tendency; it had no intention of setting up a program, of influencing public opinion, the government or parliamentary bodies. Its purpose was only to do research work. Yet the president of the congress, Dr. Moll, in his opening address, designated the "Ingese" as a "society having a certain tendency", and unquestionably being open to abundant criticism.

The program showed that the medical point of view was not predominant, but that a hearing would be given to biology, physiology, pathology and therapeutics, as well as to social hygiene and eugenics, psychology and education, sociology and civilization, criminology, law of domestic relations and Malthusianism. Thus the varied program exhausted every approach to the delicate subject.

Krafft-Ebing and Steinach were recognized as the pioneers and leaders who pointed out new ways. This is all the more interesting when we recall that, barely six years ago, no serious scientist would officially have anything to do with Steinach, his method or his results. Yet, today, the entire congress bore, so to speak, Steinach's mark. Although he was not personally present at the opening day, his name repeatedly appeared in reports, lectures and discussions. He shared the triumph, however, with those who had applied his experiments

*Held at Berlin, Germany, October 10-16, 1926.

in medical practice and had dared, in the face of wide opposition from the scientific world, to treat human beings, where Steinach had but experimented on animals.

Dr. Kulz, the German Minister of the Interior, welcomed the congress in the name of the German Government and Director Richter tendered the welcome of the Prussian Ministry of Education. The University's welcome was extended by its present rector.

Thus the Congress opened in a most promising way. Apart from the scientific objectives of the congress, it is of the highest significance for the international relations of large circles from widely different professions.

First Day of Sessions

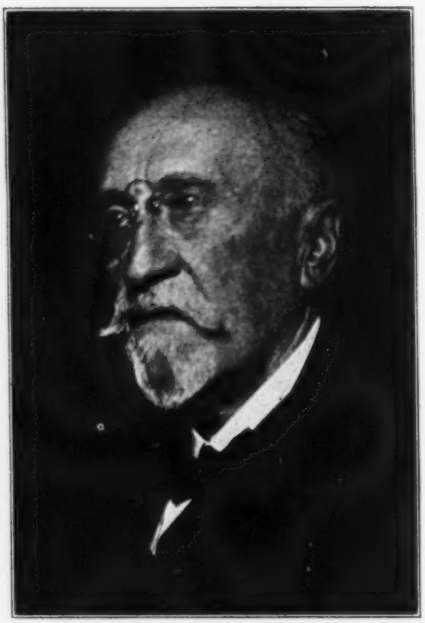
By Dr. Curt Thomalla

Monday, October 11, the first meetings took place at the Langenbeck-Virchow House. Besides the principal meeting, section meetings on special topics were scheduled, and additional meetings had to be called during the week. The following is a short bird's-eye view of the many lectures, reports, demonstrations and discussions held. Such a view is necessarily rather superficial, because it was humanly impossible to attend most of the lectures offered. We may confidently expect that a comprehensive and detailed report will be published on the results of the congress, and may therefore restrict ourselves to mentioning a few of the most important facts and reproducing general impressions of the meetings.

Offerings on the first day were so highly specialized that the biological specialist was really the only one who profited.

The first day was largely reserved for foreign speakers. Crew, of Edinburgh, gave a lecture on "The Scrotum and the Mechanism Regulating Scrotal Temperature." Dr. Oscar Riddle, of New York, spoke on "Proofs and Implications of the Complete Transformation of Sex in Animals." Paglioni, of Rome, spoke on "Nervous Sexual Processes." Gley, of Paris, spoke on "The Nervous System and the Generative Glands, etc."

Every foreigner read in his own tongue, and lectures were not interpreted. The congress was well attended, not only by physicians but also by many lay people and reporters of the daily press. The latter may have been somewhat disappointed; for the layman may find it amusing that a well-known scientist will journey from afar to discuss at a congress the reaction of some body-organ to some degree of temperature, or the positive transformation of hens into roosters by means of some gland tumor (Berner, of Oslo, on "Masculinization due to Ovarian Tumors"). Yet, on this detailed work is based the scientific structure of vast and superior future research and experimentation. What appears insignificant today, and may remain inconsequential perhaps for years, some day becomes the stepping-stone to new and important stages of knowledge. Here is collected the material for scientific knowledge, the "bricks" for the structure of science. And, in this sense, spoke Professor Sellheim, of Leipzig, who was perhaps the most sympathetic and impressive speaker of the day. He lectured on "Serum Extract Reactions and Attempts at their Explanation." A detailed report of his lecture would lead too far afield. Yet this phase is one that calls forth the deep appreciation of accurate detailed work in science.



Dr. E. Gley, Paris.

The term *serum extract reactions* is intimately connected with the name of Abderhalden, probably because the many modern improvements and corrections still going on date back to the original and, at the time, sensational *Abderhalden reaction.* The

latter consisted in a certain laboratory method of determining by the blood serum the existence of pregnancy or of a cancerous tumor. Dialysis played an important role. Professor Sellheim compared the initial method to building with "rough stones." The extract used had to be prepared and modified for days by incubating and filtering processes. Today the method has been so refined that most laboratories are able to furnish "finished stones," or, speaking plainly, such diagnostic reactions can be determined with absolute certainty in a few hours.

Sellheim also took part in the discussion of Berner's (Oslo) paper, showing pictures of a woman, forty-five years old, in whom ovarian degeneration had provoked spontaneous and unusually extensive masculinization. Her voice, gait and appearance had changed considerably, and a full-grown beard framed the formerly pretty and feminine face. Sellheim facetiously pointed out that the unfortunate woman would probably have been burned at the stake, had she lived at the time of witchcraft trials. The surgical removal of the ovaries completely restored the woman to normal. A series of slides illustrated this interesting case, showing the pretty and healthy woman; then the masculinized and disfigured woman; and finally the restored matron, and confirmed Sellheim's report.

Second Day of Sessions

By Dr. Harry Benjamin

The only foreign speaker of the day was Bemmelen, of Groningen. He presented an interesting sexological subject under the title, "No More War." This shows the varied and active interest this research congress takes in life and even in politics. Bemmelen made the assumption that the phenomenon of war, that is the warlike instinct and the impulse to fight, is based on the primary sexual passion in the male, which recurs periodically and irresistibly and finds its counterpart among animals in the fight among the males for the possession of the females. Associated phenomena of war, such as war-paint, music, chivalry, contempt for death, blind rage and cruelty, all bear the characteristics of the male sexual urge.

The female characteristic is not to oppose, but on the contrary to encourage this warlike passion. Games of war, quarrels among boys and youngsters, and, later on, warlike playful exercises, such as fencing and dueling, signify preliminary preparations for instinctively anticipated demands of adult life. Men fought originally to win favor in the eyes of women. A corresponding, though secondary, part is played by the male's desire for hunting, by the *wanderlust*, and finally, by the instinct of self-preservation, which is, however, more defensive in character.

Human evolution has deprived the fighting impulse of the male of its original significance as a duel for the possession of the female. It has, for humanity, transformed this primary impulse into an increasingly fatal, but as yet irresistible driving force.

Dr. P. Bouin, Strassbourg.

Dr. Birnbaum, of Berlin, lectured on "Sexuality and the Development of Psychosis." Purely biologic and, in particular, endocrine processes often play an important part in the development of mental disturbance; i.e., in women, the monthly period and pregnancy, and in both sexes, the age of puberty. In this respect, clinical observations of a large number of women students yielded highly interesting results, which should induce thoughtful and humane consideration.

Accurate psychical research and questioning showed that the majority of these women, who were mentally above the aver-

age, disclosed, during the monthly period (that is at the time of their highly increased endocrine sex consciousness), actually paranoid traits, simulating delusions of persecution. For instance, they would complain of slights and discourtesies from their male colleagues, and would belittle themselves. All these phenomena disappeared as soon as the organism was no longer impaired and influenced by the menstrual process.

This is an example of the frankness with which modern research opens up vistas of wide social significance by broaching subjects and events that could not even be touched upon a decade ago and were taboo even in scientific circles. Authentic facts, like the above example, teach the criminologist, judge, attorney, and finally every observer of real life who has eyes to see and ears to hear, a great lesson!

Dr. Moll, of Berlin, lectured on "Homosexuality and Socalled Eroticism." He made a spirited attack on the view, taught particularly by homosexuals and widely supported by literary circles, that eroticism is a special and even nobler quality, differing from love and sexuality. The normal and sound feeling of all nations and races outlaws homosexuality, even where its practice cannot be criminally prosecuted.

Mrs. Charlotte Buehler, of Vienna, was the first woman speaker. Her important observations should interest all teachers, and especially all parents. Systematic observation and study of a large number of cases yielded the following results: Before the first menstrual period, girls show a more or less permanent phase of restlessness, mental inability, individual seclusion, obstinate rebellion and complete unproductiveness. With the onset of puberty, all these symptoms subside. During this period of mental inability, in the average, more demands are made on the girls in the higher grades. When the onset of puberty restores them to mental maturity and activity, girls usually leave school and are thus deprived of every objective.

Observation on boys cannot be obtained so accurately. If symptoms are readily observable, they generally indicate a feminine disposition. In the boy, corresponding phenomena, on the whole, appear between the ages of twelve and seventeen. For the difficult child of the future who presents an educational problem, life will undoubtedly be less vexatious and progress easier as soon as research experiments resting on a firm basis, by specialists and other interested persons have spread their teachings to those who should acquire such knowledge.

A most valuable lecture was given by Alfred Adler, of Vienna. He spoke in his pleasing manner on "Erotic Training and Erotic Retreat", outlining some of the fundamental theories of "Individual Psychology", of which school he is the founder.

Two courses of highly interesting afternoon lectures were offered. Attention may be briefly called to those of Zondek, Aschheim and Laqueur, each of whom reported that, independently of the others, he had succeeded in isolating a biologically effective ovarian hormone. Their preparations represent the active principle in the female generative gland causing female development, the formation of typically female bodily organs and sexual characteristics, as well as feminine traits and qualities. This important and valuable substance has already been successfully tested clinically; i.e., in compensating typical symptoms of ovarian deficiency during the change of life.*

The German Scientific Film Industry arranged an evening entertainment, abundantly demonstrating to the international visitors its achievements and practical participation in hygiene, medico-social enlightenment, and genuine scientific research work. The popular medico-social film, *False Modesty* (scenario, manuscript, editorial arrangement by Dr. C. Thomalla; scientific collaborator, Dr. N. Kaufman), which has been shown in almost every country, was enthusiastically received, even by the prudish Anglo-Saxons. The film deals with the nature of venereal diseases, their prevention and treatment. For those who did not fancy a combination of enlightening objective problems with a moving picture story, the same authors offered the film *Scourge of Humanity*, which is a purely objective series of pictorial demonstrations in order to illustrate a popular scientific lecture. This film had the unqaulified approval of educators in particular.

Third Day of Sessions

By Dr. Harry Benjamin

In his lecture, "What the Decrease of Venereal Disease in Sweden Teaches Us," Almkvist, of Stockholm, emphasized particularly the free treatment offered by the government.

*The author has been able to verify this observation in quite a number of his own patients.—H.B.

Professor Jadassohn of Breslau, chairman of the German Society for Combating Venereal Disease, made an important statement concerning the international questionnaire regarding salvarsan (arsphenamine). Replies from nineteen countries were received. Almost without exception, they endorsed the undoubted value and relative harmlessness of salvarsan. Fourteen countries testified to a marked decrease in syphilis. The statistics of some other countries are very uncertain. The important point is that immediate salvarsan injections eliminate the danger of infection long before the syphilitic patient is cured. In France, syphilis declined 50 percent from 1919 to 1925. The percentage has increased since then. It is significant that one French scientist partially ascribes this mounting curve of the disease to the substitution of French bismuth for German salvarsan preparations, the former being preferred today in France for syphilis medication.

Willis, of London, lectured on "Surveying the Prostitution in Great Britain at the Present Time from the Social Hygienic Standpoint." Bohn, of Ploetzensee, lectured on the "Status of the Problem of Prostitution." This clergyman agreed with the medical view of abolishing reglementation, together with the double right and the double moral standard.

Ruland, of Wuerzburg, gave a most interesting historical survey of "Foundling Institutions and their Effect on Illegitimate Sexual Intercourse." Although popular custom and religious discipline outlawed the adulteress and unmarried mother, their children were always cared for in foundling institutions, first built in the eighth century. The church and pious charity made provision until the eighteenth century, when the mundane-humanitarian lodge of Free Masonry endowed foundling institutions because of their fear that the human race might die out. Since David Hume's time, in 1752, foundling institutions have been bitterly attacked in Germany. In spite of possible distrust, Ruland defends foundling institutions, chiefly as preventatives against the rapidly increasing practice of abortion.

Dr. M. Marcuse, of Berlin, was the last speaker of the day. It is impossible to refer more than briefly to his address on "The Value of the Procreative Power in Marriages among Relatives", which dealt with questions of heredity that are among the most important and significant of modern problems. Considering the striking contradictions between the teachings of racial hygiene and eugenics, or the improvement of racial stock, on one side, and modern views of social ethics and humanitarian sentimentalism on the other, it might possibly have been profitable to assign more time to this subject. Our ignorance concerning it is still stupendous, and a congress of such distinction would be the proper medium to launch new teachings that are to become common knowledge.

Dr. F. A. E. Crew, Edinburgh.

Fourth Day of Sessions

By Dr. Harry Benjamin

The first speaker, Mallinowski, of London, lectured on "Anthropology and Sexology." He compared the animal with the human families. Sex feeling in the former is based on instinct; courting is restricted to the period of heat, that is, the periodic attack of sexual passion. In the human subject, courting has lost its purely instinctive character because man may freely love at any time. Yet, where the biologic mechanism restricts passion in the animal, a system of social barriers and laws restrains man, insuring family integrity and the institution of marriage. Mallinowski's address culminated in the statement, "The human fam-

ily is not only the bearer of human life, but the upholder of human culture. One of the most fundamental functions of the family is to transmit by education the knowledge and tradition from one generation to the next. This function no other institution can fulfill. There is abundant evidence that cooperation and social cohesion issue from the family. Thus the family is the nucleus of human society."

Another English visitor, Dr. Willis, of London, pleaded for biologic instruction to prepare the growing generation for the demands of adult life. To teach athletics and sport is not sufficient, this narrow view being apparently a peculiarly English outlook; the life of the mind and the soul should be enriched at the same time. In another address he told how the English Board of Social Hygiene had enlarged its scope by giving free treatment in contagious diseases and free instruction as to their prevention.

The sessions were again very international in character. Dr. Mieli, of Rome, spoke on "Sexology and Literature in Italy;" Professor Bjerre, of Stockholm, on "The Mystery of the Orgasm." The latter dwelt upon the close relation between sexual passion and the phenomena of religious ecstasy, and with ideas of creativeness and art. Subsequently, during the discussion, he encountered some spirited opposition. Professor Mueller-Freienfels, of Berlin, lectured on "Sexology and Esthetics."

Finally, Wieth-Knudsen, of Drontheim, addressed the congress as follows: "Pardon my poor control of German. Man's experience with a language resembles his experience with a woman. He knows both; perhaps he knows both intimately; yet he never controls either!" His address was quite as witty as his introduction and contained many thoughtful and brilliant ideas on the "Present Status of the Woman Question in Europe." His motto was Victor Hugo's epigram of 1853: "The eighteenth century has proclaimed the right of man; the nineteenth will proclaim the right of woman." Wieth-Knudsen explained that the emancipation of woman and the modern woman movement originated from the basic liberal view that all men are born equal, as stated in the proclamation of the rights of humanity in the French Revolution of 1789. The truth of this statement is the touchstone for the justification and expediency of the equalitarian aspirations between the two sexes. Naturally, the propagandists of woman emancipation have always tacitly ignored this point, but among Germanic races, relations are adjusted on the basis of sex equality from birth.

The successes which woman had hoped for in free competition with man have not however, been realized in any sphere. Just as social and political equality has been wearing out nations in parliamentary party fights, so the legally enforced equality of the sexes has loosened family bonds and has threatened monogamy. Moreover, it has resulted in destroying the morals of woman and particularly of the adolescent girl.

Life-long monogamy was an achievement of the white man, attained in the interest of the wife and children, and is the foundation of the civilization of the white race. The modern evolution of law, which deprives man almost completely of his authority, brings about the dissolution of monogamy and, on the other hand, takes the responsibility away from the emancipated woman. Our civilization is thus threatened, and its beginning decay may be noted in many spheres.

Biology and psychology recognized long ago the radical error in the assumption of the equality of all men and of the two sexes, with respect to physical and mental constitution. The ultimate result of woman emancipation we have now before us in the voluntary birth control practiced by woman.

Woman emancipation is no solution of the woman question. Continuation or further development of existing conditions will surely annihilate the family, which is the nucleus of human society. Woman will profit least by becoming the caricature of the womanly ideal that all white men visualized and actually strove to realize in every ascending epoch of our race.

In the section for biology, physiology and pathology, lectures were given by H. Rohleder, of Leipzig, P. Wiesner, of Berlin, and F. Groedel, of Nauheim, among others. They are difficult to be abstracted briefly, on account of their highly specialized subjects.

The section for sociology and civilization offered the interesting address of Professor Dr. Henning, of Danzig, on "Group Marriage and Woman's Right in Old Europe." Many old Irish manuscripts, surpassing the Edda in age and extent, describe in detail the peculiar sexual relations of the primitive European. A group of ten to twelve women married, in common, a group of ten to twelve men. Monogamy gradually developed through decimation of

such a group. These sources throw new light on the ramifications of life in primitive Europe.

Stigler, of Vienna, reported observations made during an expedition to Uganda on "A Comparison of the Sexual Physiology of Negro and White Women." Psychologically, womanliness is highly developed in the negress. Her frankness, ease and naturalness in sex matters are remarkable and are not to be taken for indecency. The negress is far from obscene.

Dr. Joh. Ude, of Graz, represented the Roman Catholic faction of the congress and had already taken a lively part in previous discussions. He now gave an address on "The Ethics of the Catholic Church in Relation to the Sexual Question." He set up as required by the Roman Catholic Church—ideas which our grandparents might have taken for granted—ideas which dominated an earlier education before these problems filled public discussions and the juvenile question arose. These ideas, he felt, should be supported by state and society.

His address found no open opposition, yet he won hardly any consent, and little genuine sympathy. There is no such simple solution to the confused problems of a suffering age! Reaction hardly makes for progress.

Dr. Moll himself presided over this meeting and remained silent after Ude's lecture. This fact may have contributed to the opinion—frequently voiced later on—that this was a "reactionary congress." The further fact that Dr. Magnus Hirschfeld, known as one of the most progressive and courageous workers in sexology, had not been invited to attend the convention, strengthened in the mind of many the belief in the "reactionary tendencies" of the congress.

The last speaker of the day was Fluegge, of Charlottenburg, an attorney whose observations deserve attention. He lectured on the "Interest of the State in the Ethics of Sex." The basis of occidental civilization is a sex ethic, developing from the extreme religious view that all enjoyment is sinful. This rigorous suppression of natural impulse fostered the deep spiritualization which distinguishes occidental civilization from every other. Science and art found a ready soil here. This voluntary suppression is intimately connected with capitalism, which made possible the highly differentiated types of modern industry and of present day life.

The evolution of the recent generations is undermining this old type of sex ethics. Marriage is becoming more difficult. On the other hand, the present high-strung forms of physical and mental work require a more complete relaxation, which is preferably being sought in love affairs. Procreative power is thus increasingly weakened and valuable family stock is reduced. A catastrophe threatens the monogamous races, which are today the bearers of civilization and culture. It also threatens the interest of the state by the probability of essentially changing the proportionate strength of political parties. That class of the people will triumph that conducts itself most rationally in regard to sex-ethics and this will determine the development of the future age. Therefore, it becomes the duty of the state to support the biologically sound elements among its subject; in other words, to give preferential treatment to fathers of families and to discourage bachelors and childless couples. Governments, as well as industry, should advance only those employees who are heads of families.

Fifth Day of Sessions

By Dr. Curt Thomalla

The chief session of October 15 was devoted to "Criminology and the Law of Domestic Relations." Director Wulffen, of Dresden, spoke on the sexual starvation of convicts and prisoners under indictment. He concluded that, on the whole, there is no cause for alarm. He indicated relief measures by exercise, diet, etc. In the main, only those prisoners are in sexual distress who suffer likewise when at large.

Count Gleispach, of Vienna, suggested in his address on the "Etiology of Sex Crimes", the creation of an international bureau to collect data on sex crimes with attention given to their character and their frequency at various times and places. Further intensive research might be undertaken with the help of this material.

Professor Huebner, of Bonn, gave an address on "Crime as an Expression of Sexualism." In his address "Sex Crimes under the Future German Penal Law," Dr. Loewenstein, of Berlin, earnestly disapproved of many blunders and errors in our penal code. Two views of life are here opposed: One expects the penal code to purge and refine sex morals, and demands even more and stricter penal laws; the other fears that danger to sex morals will be augmented by an increase in criminal proceedings, and requests that sex matters be left to the

right of the individual self-determination of the adult, in so far as public morals will not be offended nor the rights of third parties violated.

The proposed new penal code, however, vacillates between these two views, trying to compromise everywhere. Dr. Loewenstein cited numerous examples to show how unjustly some of these crimes are penalized, while others go unpunished. He showed that the penal provisions in question foster malicious instigations of criminal proceedings, graft and black-mail.

Three speakers discussed the question of "Expert Testimony regarding the Mentality of Juveniles in Trials for Sex Crimes." Professor Stern, of Hamburg, described the credibility of juveniles generally as very low. Dr. Moll, of Berlin, opposed this view. Both speakers agreed with Professor Hellwig, of Potsdam, that the decision as to how much credit should be given to testimony of juveniles should rest with the judge. Psychologists rather than psychiatrists should not only give expert testimony but take active part in the trial, because frequently the juveniles in question are not pathological.

Professor Steinach, of Vienna, was the speaker at the afternoon session on "Biology, Physiology, Pathology and Therapy." Attendance was therefore larger than is usual at such a highly specialized section meeting. An ulcer of the tongue, unfortunately, prevented Steinach from speaking. His pupil, Dr. Peter Schmidt, of Berlin, read his manuscript. Steinach himself briefly explained the subsequent demonstrations. His address was chiefly on masculinization and feminization; that is, on the artificial transformation of males into females and *vice versa*—experiments which had revolutionized all former views of sexology. He also demonstrated experimental hermaphrodism, or the surgical creation of hermaphrodites. The technic of these operations was described in detail. The antagonistic action of the male and female sex hormones was emphasized.

A new fact that was brought out was Steinach's success in isolating the active principle of the ovary. This specific female sex hormone is prepared from cattle ovaries and placenta. The preparation is now standardized and permits accurate dosage. The experimental and biochemical tests of this substance bear out the claim that, in the new hormone, we have a genuine physiologic substitute for the normal endocrine activity of the human ovary.

Dr. E. Steinach, Vienna.

Dr. Moll, as president of the congress, congratulated the scientist on his results, which he compared in fundamental importance to the Mendelian laws of heredity. After him, Dr. Oscar Riddle of the Carnegie Institute of New York, who was chairman over this meeting, as a representative of the United States, expressed to Steinach the thanks of the world for his contributions to science.

Since no discussion on Steinach's address was scheduled, it caused a stir in the large audience when Dr. Moll announced that Professor Benda had asked for the floor and that he would make a short statement. This famous Berlin pathologist was known for the past ten years as Steinach's most bitter opponent, and when now, to the surprise of everybody, he openly paid high tribute to Steinach and, in a truly scientific spirit, confessed that Steinach had succeeded in convincing him of the truth of his theories, the congress had its long awaited sensation. The applause became a demonstration when the two scientists shook hands. On this dramatic moment a medical journal comments, "It was an historical moment when Steinach's most vehement opponent, the histologist Benda, rose and freely con-

fessed that he was ready to surrender and fully endorse Steinach's theories."

Steinach's work was frequently mentioned in several lectures held before the section of biology and pathology. Haberland, of Cologne, spoke on "The Transplantation of the Male Generative Glands", and demonstrated, on microscopic sections, that implanted glands were absorbed by the organism in a relatively short time. Although disagreeing with some authors on the beneficial effects of transplantation methods in human beings, he did not deny some good results if these glands were taken from other human beings.

F. Grueter and W. Frey, of Switzerland, discussed transplantation of testicles and ovaries in animals and reported many striking and lasting results. They emphasized the importance of gland transplantations in veterinary surgery. Stocker, of Lucerne, reported positive results with sex gland transplantations in human beings and contradicted Haberland in many points.

A very interesting paper was read by V. Bergauer, of Prague, on the effect of the "Steinach Operation" on the cataract of a senile dog. The eye had cleared up considerably after the vasoligation and had remained so for a considerable length of time. Similar observations had been made on senile cataracts in fowls.

Sixth and Last Day of Sessions

By Dr. Curt Thomalla

Steinach's influence was still widely felt on this last day of the sessions. The president of the Congress made Steinach the chairman during the first and most interesting address by Dr. Harry Benjamin, of New York, on "The Control of Old Age by Gonodal Therapy." Dr. Benjamin is undoubtedly the most famous among Steinach's pupils, and from the first has made himself the practical champion of the eminent theorist.

Benjamin's address contained many new points. He emphasized that the newly discovered medical method of reactivation should never replace the indirect, preventative measure like general proper living and personal hygiene. The combating of old age by direct, "specific," operative measures is more effective in individuals whose organs are sound and whose health is not undermined by bad habits in their mode of living.

He testified to the general applicability, harmlessness, relative simplicity and undoubted effectiveness of the socalled Steinach operation, or vasoligation, in retarding old age and cited over one hundred cases from his own practice, observed by him up to five years. No success was obtained to justify sensationally exaggerated anticipations, yet the average results were sufficiently impressive and convincing to recommend the widest application of this method to combat premature as well as physiologic old age.

In the treatment of women, Benjamin, to a large extent, followed Steinach's suggestions as to the use of the diathermy methods. However, by studying each case from an endocrine point of view, Benjamin began not only to treat the ovaries with the diathermy current, but also other glands, like the thyroid, the pituitary or the suprarenals. He has thus worked out an entirely new and particularly promising technic which allows wide individualization, and has already obtained very remarkable successes. Occasionally, Benjamin adds injections of gland extracts, of which the newly discovered biologically efficient ovarian preparations are of special benefit.

Dr. Norman Haire, London.

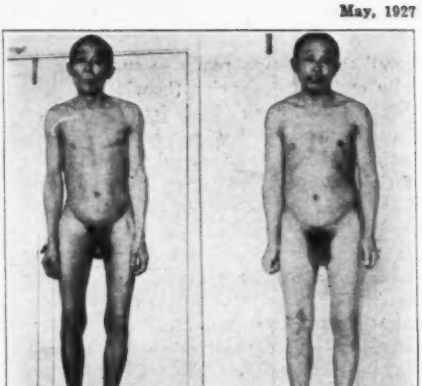
In his conclusions Benjamin warned against reviving an exaggerated propaganda, sharply criticising the "medical pirates" who have discredited the method by sensationalizing and commercializing it. He criticized just as severely certain medical reactionaries and political party leaders who are retarding the progress of science by rejecting new methods without examining them and without acquiring sufficient knowledge of the subject. The practitioner will probably have to change his mind in favor of Steinach just as much as the theorist had done it the day before.

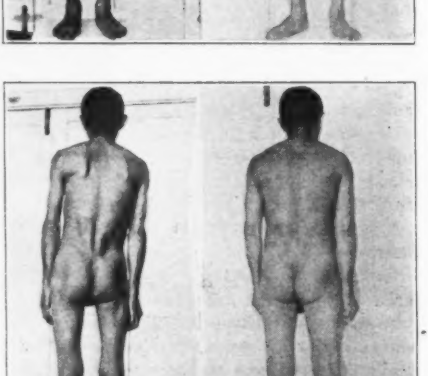
Dr. Peter Schmidt, of Berlin, reported four hundred cases in which old age was overcome, biologically, according to Steinach's method. Most of these patients had remained under observation for six years. His illustrations of rejuvenated human and animal subjects, with their corresponding control pictures, were highly impressive.

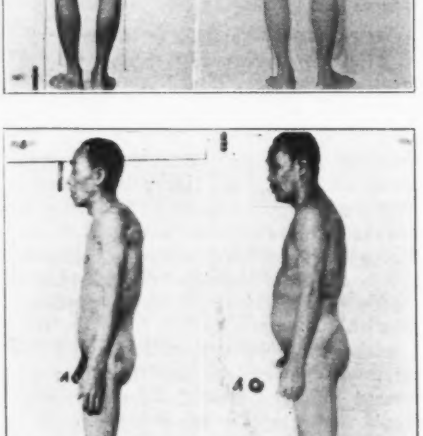
Schmidt also showed a series of instructive photographs which he brought back from his prolonged stay in China. While there, he performed the Steinach operation on many Chinese convicts to prove that neither suggestions nor changes in the mode of living had any part in the reactivating effect obtained. Not a word was spoken with these patients, who knew nothing of the nature and possible effects from the operation. The photographs clearly demonstrated the remarkable changes obtained. Some patients had gained 30 pounds in weight; some had changed so greatly in appearance that they hardly resembled their former selves. Besides, they became useful workers again.

Schmidt pointed out that the former theoretical opposition had greatly befogged the whole issue. Steinach's followers, therefore, intentionally refrained for the past few years from publishing anything until overwhelming practical evidence could be presented.

Another section of the day offered numerous stimulating contributions, for instance addresses by Steinmetz, of Amsterdam, on "Immigrants and Psychic Heredity"; by Michels, of Basel-Turin, on the "Sexual Factor in the Immigration Problem." Professor Wolf of Berlin spoke on "Declining Birth Rates and Sex Morals," and believed inhibitions for procreation and fertility to be due to direct and indirect effects of modern sex morals. The feeling of responsibility for the unborn, he said, was as inhibiting to the birth rate as was the general approval of sexual enjoyment as an end in itself.







Chinese prisoner upon whom Dr. Peter Schmidt, of Berlin, did a bilateral vasoligation.

The left-hand picture in each pair shows different views of the patient before operation: the right-hand pictures are of the same patient, in the same positions, 3 months after the vasoligation.

Attention may finally be called to the address by Dr. Norman Haire, of London, on the "Comparative Value of Anti-Conceptional Methods," illustrated by instructive slides. He emphasized that medical advice was an indisputable necessity, and practicing physicians should pay more attention to the study and technic of this phase of the sexual problem, and thus prevent its being taken over by lay people, quacks and charlatans.

A number of instructive demonstrations and brilliant social entertainments were offered at the First International Congress on Sexology. It has deeply impressed all who attended, and it has undoubtedly greatly stimulated every one, even the most specialized worker in this field.

Ultraviolet Radiation in the Treatment of Pulmonary Tuberculosis

By H. H. REDFIELD, A.B., M.D., Chicago

TO the general practitioner the question of the treatment of pulmonary tuberculosis is of paramount importance, as very frequently one is called to a case in which certain circumstances, such as a lack of local sanatorium facilities or an unwillingness on the part of the patient or his family, make the classical treatment of the condition an impossibility, and home treatment is imperative. In such cases it is usually possible to institute such measures as open air sleeping, diet and rest, which will, in a measure, approximate the usual methods in vogue in an institution devoted to the care of this class of patients.

As an adjunct to this general treatment, heliotherapy or actinotherapy may be instituted. In the latter, we have an exceedingly powerful and useful agent for good; but that it is also cabapble of doing great harm is not so universally understood by those who are making use of this agency in their practice.

In discussing the question of pulmonary tuberculosis with numerous physicians, I have been forcibly struck with a negative attitude on the part of some of these workers; the results which they have reported not being in keeping with mine. These negative reports prompted me to undertake a deeper and closer investigation of the matter, with a view to ascertaining, if possible, the reason for such failures or untoward results.

A series of questionnaires was submitted to several physicians who had been reporting negative results, and from these a fairly good idea of the conditions was obtained. In making these inquiries two phases of the subject were considered; first, the agent employed, and second, the technic of application. The first was not considered of prime importance, as the standard air-cooled lamps are all reliable and practically alike in their effect. Eliminating the question of equipment employed, the study simmered down to the technic and class of cases treated.

The Sun and the Quartz Lamp

When Rollier first announced his results with exposure to direct sunlight, it was accepted as marking an epoch in the treatment of pulmonary tuberculosis. The profession at large, as well as those doing special work in tuberculosis, hailed it as a cure for the "great white plague", and it became an almost universal procedure.

It was not long, however, until reports began to filter into the literature showing that, in many instances, the expected had not happened and that, instead of benefit, certain patients showed unmistakable symptoms of a retrograde effect—in other words, they became worse instead of better—and finally it was shown that heliotherapy was of benefit only in a certain class of cases, and was not a panacea in tuberculosis, but that, when used in certain cases, it was productive of great harm.

All cases which present themselves are not suitable for actinotherapy and its exhibition in such cases will, in every instance, be productive of dire results.

Assuming the hypothesis that actinotherapy, or ultraviolet irradiations was, in a measure, artificial sunlight, was it not reasonable to carry the hypothesis still further and again assume that the conditions governing the use of heliotherapy would operate in the use of acinotherapy and that results—good or bad—could be anticipated from the use of ultraviolet rays such as you would expect from heliotherapy?

The questionnaires above referred to showed that this postulate had not been considered by a majority of those answering—

a condition which, to me, was satisfactory evidence that the blame had been placed on the agency, whereas it should have been placed against the technic and class of cases treated. Weighing these failures against my more favorable verdict, I could not help feeling sure that my conclusions were based upon sound reasoning.

In using ultraviolet radiation in pulmonary tuberculosis, one must always keep in mind its possibilities, using caution in the selection of cases and being equally cautious in the technic. One should follow as closely as possible a line of procedure identical with that in use in the application of heliotherapy, treating with actinotherapy only those cases in which it is indicated, and denying it to those in which it is contraindicated.

To clarify the situation somewhat, let me explain what I mean to convey by the terms "indicated "and "contraindicated". In making a selection of suitable cases one can ignore the National Classification, and not give any great amount of attention to such designations as, "incipient; moderately advanced; or far advanced". In place of this classification one should consider two groups; first the surgical or extra pulmonary cases; and, second, the pulmonary cases. This latter group you should subdivide into the "productive" and "exudative" types, and these should be your guides as to whether or not to use actinotherapy.

In the exudative type you will find that the onset is generally quite dramatic. The temperature is high; there is tachycardia, loss of weight, cough and expectoration, with night sweats and the typical physical findings.

In contradistinction to this, the productive type shows a slow and insidious onset; the toxic symptoms are mild; cough may or may not be present; expectoration is usually absent or very scanty, and there are not, as a rule, any night sweats. Physical examination may show large areas of involvement, and moist rales, but little activity.

The following diagram taken from Watson*, of Tuscon, Arizona, will give a better idea of this classification, and it will be found a very valuable and useful guide in the selection and treatment of cases.

By following this classification closely, results will be exceptionally gratifying to both patient and physician and the untoward results that have been reported will be absent.

Results will be greatly improved by keeping a record chart of all cases, as this will enable one, from day to day, to estimate very closely just what the treatment is doing, and one can increase or decrease the time of exposure, or give any added instructions regarding diet, exercise, etc., that may seem expedient. In this connection I offer the following treatment chart which I have adapted for the use of ultraviolet radiation.

Patient's Chart

Name Month, Days of Month

Temperature
Before exposure
After exposure
Pulse
Before exposure
After exposure
Skin reaction
Tanning
Sputum (amount)
Discharge (amount)
Headache or Dizziness
Lassitude, Fatigue, Exhaustion
Nausea
Appetite
Pain or Discomfort in Part
General Feeling
Other Symptoms
Time of Radiation
Distance of Lamp
Time of Day
Before or After Eating
Blood Picture
W. B. C.
R. B. C.
Color Index
Coagulation Time
Weight

The method of application is, in my opinion, almost as important as the proper selection of cases for treatment, and my investigations on this subject have shown that many of the negative results have been due to errors of application. I have seen cases in which one or two radiations have produced such an excessive cutaneous reaction that they have been discontinued, and a prejudice against this form of treatment that was difficult to remove has been created in the mind of the patient.

I have found that a close adherence to the technic of heliotherapy, as regards the time of exposure and use of the "zoning system", will be productive of far better results than will an indiscriminate radiation of the body from the beginning. Following the suggestions of Rollier, it has been my custom to divide the body into zones, as follows:

*Watson, Samuel H.: Heliotherapy in tuberculosis; a scheme for the proper selection of cases, with a word about technic. *Southwestern Med.*, 9:4. January, 1925.

Classification of Tuberculosis

Extrapulmonary
(Infections of external lymph glands, bones, joints, peritoneum, etc.)
- Without pulmonary lesions ..... Class 1
- With pulmonary lesions ..... Class 2

Pulmonary
(Infections of lungs and tracheobronchial glands.)
- Productive
  - Childhood type—tracheobronchial glands ..... Class 3
  - Adult type (lungs) ..... Class 4
- Exudative ..... Class 5

Indications:
Class 1.—To use treatment in all cases.
Class 2.—To use treatment in all cases, but use care to avoid reactions and especial care in radiating chest.
Class 3.—To use treatment in all cases.
Class 4.—To use treatment only in cases which, in spite of best dietetic or hygienic treatment, remain stationary or lose ground.
Class 5.—Never use treatment.
Note.—A rise in temperature 1 hour afterirradiation is a danger sign. Wait a few days and begin at the beginning. Avoid irritation.

1.—Feet to ankles.

2.—Ankles to knees.

3.—Knees to hips.

4.—Hips to chest.

5.—Chest to neck.

The arms are radiated as they lie alongside the body.

Using these zones, the first exposure is given in zone number one, the lamp being at a distance of thirty to forty inches from the body. This initial exposure is given for a period of one minute, front and back, and with each succeeding exposure a new zone is radiated for one minute and the preceding zone is given one minute additional exposure. This relationship is maintained until each zone has been covered, when a gradual increase of complete body radiation is given, up to a maximum of ten to twenty minutes. I have not, as a rule, found it expedient to exceed twenty minutes, although I have, in some cases, used as much as thirty minutes.

This question of the time of exposure is one that should be governed largely by the nature of the reaction produced, and there is no hard and fast rule by which one can be guided in it. The personal equation plays a very important part here, and personal iodiosyncrasies will have to be taken very seriously into account. Patients who show early pigmentation can be given increased dosage more rapidly than those who redden or show a tendency to blister. These latter should be given a more cautious supervision, as burning should be guarded against in every case.

Complexion and the Endocrines

The question of complexion is one of importance and can be used as a fairly accurate guide in treatment. The brunette can absorb more of the rays; that is to say, will tan more quickly and can therefore stand heavier exposures than can fair-haired persons, who have a tendency to burn. The red-haired blondes are even more susceptible.

In this connection I have noticed a very interesting phenomenon. It has long been established that among the dark-skinned races there is a natural hyperadrenalism and hyperituitarism, and this has been offered as an explanation of their complexion, skin texture, hair, etc. In some cases of blondes, I have found that the exhibition of small doses of adrenal substance, together with pituitary substance, has enabled me to give increased radiation without any of the deleterious effects which would be anticipated in such pationts. I have not, however, done enough clinical investigaing along this line to warrant making a positive statement in regard to it. I am planning to do further work on this phase of the question of endocrine influence, and hope to be able to report something of interest at some future date.

Conclusions

1.—Actinotherapy in the treatment of pulmonary tuberculosis is an agent of great good, but also one which is capable of doing great harm, and it should never be used except in cases where its indications are plainly manifest.

2.—The indiscriminate use of actinotherapy is reprehensible and should be as strongly condemned as is "shot-gun" prescribing. The indiscriminate use of this agency, especially in pulmonary tuberculosis, tends to harm the patient, and also to discredit the method in the minds of those who employ it without a sufficient knowledge of the method which they are using.

562 Oakwood Blvd.

The Gonads and the Large Bowel in Dementia Precox

A Suggestion As To Therapy

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IT is a matter of frequent observation that there are developmental defects of the reproductive apparatus and in the physical sexual characteristics in idiots, cretins, etc. That degenerative changes occur in the gonads in cases of dementia precox is also well known. The sex changes differ according to the duration of the psychosis and the period of life in which it becomes manifest. It might be expected, and as a matter of fact it is observed, that patients with a long duration of the psychosis would show smaller testes than recent adult cases. The patients in whom degenerative changes would be most definite and rapid usually do not live long enough to permit an increase of connective tissue which might, in such cases, compensate for shrinking by parenchymatous degeneration, which usually occurs in such patients.

Apart from the diminished or maldeveloped testes in such cases there are clear deficiencies of the secondary sex characters. Gibbs[1] found a purely feminine type of distribution or pubic hair (Fig. 1) in 13 percent of the younger patients with dementia precox, but in only 2.6 percent of those observed who were above the age of twenty-one. A semifeminine distribution was seen in 11 percent (Fig. 2). This is not usually accompanied by any apparent deficiency in the volume of the testes, and appears to be rather a perversion or unevenness of development. Young male patients with dementia precox frequently show deficient hair on the face and other marks of femininity, as well as diminished sexual capacity and desire (Fig. 3). In Gibbs' examination of 325 such patients, adult sex relations with the opposite sex had never been accomplished in 64.1 percent of 120 males who answered questions in a satisfactory way. Only 20.5 percent had reached an adult level of sex behavior and maintained it even for a short time, married or single.

Although it is extremely difficult directly to connect sexual deficiencies in dementia precox patients with the malfunctioning of particular internal secretions, indirectly there is evidence to show that deficiency of interstitial cell secretion, no matter how caused, is one of the factors involved in the condition.

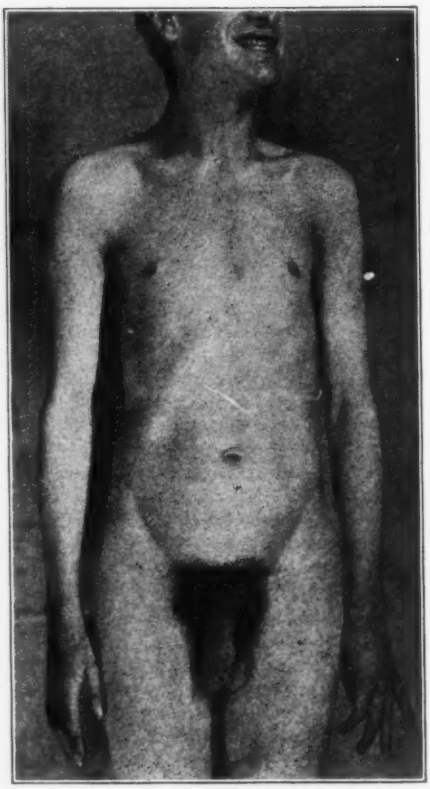

Fig. 1. Patient with dementia precox. Age on admission, 18; present age, 23; feminine pubic hair; deficient beard; no hair on the trunk; scrotal implant; testes average size; long thorax. (After Gibbs.)

Histologic Changes

In the necropsical examination of a number of dementia precox cases, Obregia, Parhon and Urechia[2] found that the seminiferous tubules were regularly attacked, and that absence of spermatogenesis was the rule, but they thought it possible that such effects were due to the same causes that

Fig. 2. Patient with dementia precox. Age on admission, 19; present age, 30; semifeminine pubic hair; scrotal implant; testes quite large; actively homosexual. (After Gibbs.)

were responsible for the dementia precox. These authors could find no evidence from their investigations that disturbances of the internal secretion of the sex gland was responsible for the appearance of dementia precox, but that in the evolution of the condition there may be alterations in the genital gland.

In dementia precox the functional disturbances and the structural alterations more especially involve the seminal gland, though the interstitial elements are always more or less affected. In twenty-five cases of dementia investigated by Todde[3] there was diminution of the weight of the testes in 88 percent, diminished function in 44 percent, and absence of function in 48 percent. In the majority of twenty cases of dementia precox in which a histological investigation of the testicle was made, Matsumoto[4] found almost or quite complete arrest of spermatogenesis.

Sir F. W. Mott[5], who made a microscopical examination of the testes of a large number of dementia precox patients, divides the evolution of the testicular changes into three stages: In the first stage there are regressive changes in both the spermatogenic and interstitial elements of the testicle, such changes indicating the formation of normal and degenerated spermatozoa, and commencing failure in the formation of normal interstitial cells, with an increase of interstitial fibroblasts; in the second stage there is, in addition, an obvious shrinkage of many of the tubules, an increase of fibroblasts, with thickening of the basement membrane and failure of spermatogenesis. The mature interstitial cells are fewer in number and there are numbers of immature cells with pale nuclei deficient in chromatin; in the third stage the tubules either show no spermatogenesis, or relatively few tubules show some spermatozoa, some being degenerated; there is failure of formative nuclear activity, and many or, in advanced cases, all of the tubules consist only of a very thickened basement membrane lined by Stertoli cells. These cells usually contain

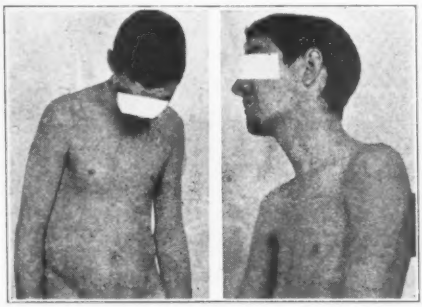

Fig. 3. Patient with dementia precox. Same as Fig. 1. Two weeks' growth of beard; absence of hair from neck and sides of face. (After Gibbs.)

lipoid granules in the syncitium and when this occurs there is also lipoid in the interstitial cells and tissue. This indicates that the essential feature of the atrophy is a primary germinal defect. (Fig. 4 and 4A).

In several of the cases of dementia precox a pigmentary deposit was found in the interstitial cells which is not seen in normal conditions except in old age, and which therefore may be regarded as evidence of presenile changes.

Those cases in which dementia precox came on in postadolescence showed histologic changes in the seminiferous tubules and interstitial cells, exactly similar to those observed in cases commencing in early life.

Therapeutic Possibilities

The therapeutic history of dementia precox is, perhaps, one of the saddest and least encouraging in the entire field of medicine; and yet, considering the vast and increasing prevalence of the condition and the enormous waste of human material during the most useful years of life, there is scarcely a disease which so urgently demands efficient handling, if such is possible. Up to the present time no method tried can be said to have given, or to give promise of, satisfactory results.

G. Frank Lydston[6], in 1917, reported the

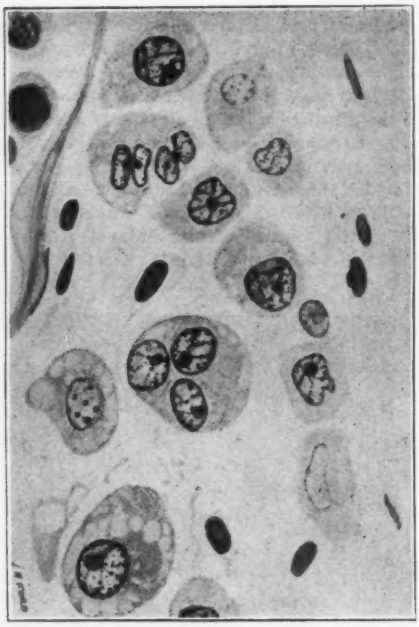

Fig. 4. Section of testis from a case of death from shock due to severe injuries. A number of interstitial cells are seen of varying size. The eosin-stained cytoplasm is vacuolated. The nuclei are well stained by the basophil dye, and show in two of the cells active mitosis. (After Mott and Such.)

Fig. 4-A. Section of testis of dementia precox advanced second state. A small vessel in the center. Above thickened basement membrane with flattened nuclei a few small immature Leydig cells are seen. A few large with vacuoles. A large number of oval and polymorphic pale nuclei, some of which are fibroblastic, are seen. (After Mott and Such.)

case of a man aged twenty-two who had an undoubted case of dementia precox, with bad heredity, in which he performed a bilateral testicular transplantation, one testis being implanted in the suprapubic region and the other in the left side of the scrotum. The scrotal implantation was successful. Beginning about one week after the operation the patient began to show marked mental and physical improvement, which progressed and continued. Lydston, while not claiming indisputable therapeutic results from the testicular implantation in this case, believed that there was abundant encouragement for further experimental work in dementia precox, and that there is a form of the disease which, if taken early, is susceptible to improvement, or perhaps even cure, by testicular implantation.

Case Reports

I shall now describe my own experimental results with testicular transplantations in cases of dementia precox.

Case 1.—F.R.R., aged twenty-two, a designer by occupation.

Family History.—Mother highly nervous and had suffered a number of "break-downs" for which she had to be treated in a sanitarium. The father was in robust health. There were two brothers, no sisters. The younger brother had homosexual tendencies, the older brother was normal. There was no history of syphilis in the family.

Personal History.—The patient was examined by a prominent neurologist and a diagnosis of dementia precox was made. The usual forms of treatment were of no avail; in fact, the patient showed tendencies to become worse instead of better. The neurologist who referred the patient to me became very much impressed with the work of Sir F. W. Mott, of England, who has demonstrated a deficiency and morbidity of the Leydig cells in dementia precox, and in view of the fact that everything possible had been tried to ameliorate the patient's condition, without success, after our consultation he proposed an experimental testicular implantation. Consent was obtained from the immediate members of the family to perform this operation, for they were much concerned about the patient, and the older brother offered a portion of his testis for implantation.

Operation.—On May 4, 1922, the operation was performed according to the writer's technic. The patient left the hospital four weeks after operation, the wound having healed *per primam.*

Postoperative Course.—The patient's mental condition four months after the operation, September 5, 1922, showed some improvement. On November 11, 1922, the neurologist reported further progress. Seven-

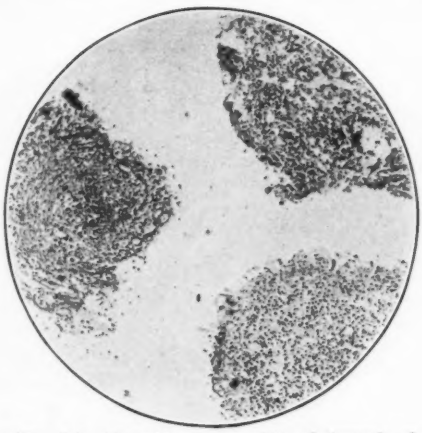

Fig. 5-A. Dementia precox. Microphotograph of transplanted testis nine months after implantation. Ocular 4X. Objective 16. Magnification 64 diam. Lietz apochromatic micros.

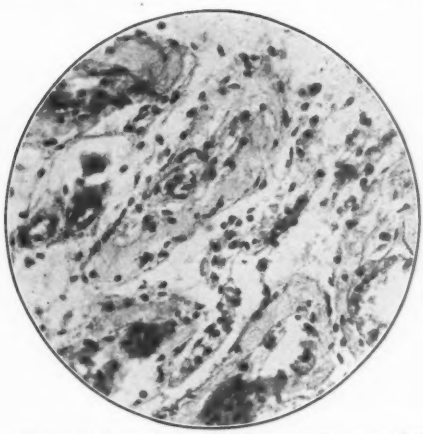

Fig. 5-B. Dementia precox. Same section magnified 268 diameter. Ocular 4X. Objective 4.

teen months after the operation the condition was about the same, and according to the reports that have reached us it has remained so since that time.

Comment.—Recovery cannot be spoken of in this case, for certain manifestations on the part of the patient are still present which do not permit definitely labelling the case as one of recovery. However, he undoubtedly is improved and, what is more important, the gradual mental retrogression that was evident before the transplantation has been arrested, we believe because of the implantation, and a degree of improvement has been reached which may, perhaps, be assumed not to have been possible of accomplishment without this form of therapy.

Case 2.—A similar case in which a transplantation was performed by the writer in July, 1921, was followed by no improvement whatever.

In view of Mott's researches I feel that more clinical evidence is necessary to establish definite indications for transplantation, and of the type of implant best suited to these cases, though the rationale of the procedure is self-evident.

Case 3.—Another case of dementia precox, Harold H. K., was referred to me by a Chicago physician. The patient was twenty-two years of age and the family history was negative. There was no insanity, epilepsy or other discoverable familial taint.

Habits. — He never slept well at night. His appetite was good; he occasionally was constipated.

Previous History.—He had never been seriously ill. He had always been melancholy and "by himself" but was otherwise mentally normal. He graduated from the public school when he was fourteen and was then admitted to high school. When he was fifteen he left high school and began to work for an electrical company. A year later he was readmitted to high school.

Clinical History.—His present condition began four years before I saw him when, during an altercation with a street car conductor, he was struck over the head with an iron control bar. There was no discoverable injury to the head, but two weeks later his mental condition began to change. He developed ideas of persecution and said that the boys in school were accusing him of having killed one of his friends. (Inquiry disclosed that one of his friends had been killed by an automobile.) He had aural hallucinations and claimed that there was a dictagraph in the wall which always talked. His conduct became intolerable and his parents sent him to a sanitarium, where his condition was said to have shown some improvement. After his return home he became apathetic, sitting at home and showing no interest in his surroundings. He still had delusions and hallucinations of various sorts, and stopped his ears with wax to avoid hearing the noises.

This patient was admitted to the American Hospital on June 19, 1922, at which time he was examined by our neurologist, Dr. Sigmund Krumholz, of Northwestern University, and a diagnosis of dementia precox was returned with the clinical records.

The noteworthy findings of the physical examination at the hospital were as follows: His temperature was normal, pulse 80 and of good quality. The thyroid gland was markedly enlarged. The systolic blood pressure was 120, diastolic 65.

He was kept under observation at the hospital for some time, and on August 1, 1922, a testicular transplantation of a giant macacus was performed, according to the writer's technic, into the right side of the abdomen. On the day following the operation the temperature rose to 102°F., and the next day to 103°F., but gradually subsided by lysis. During the height of the temperature the mental faculties of the patient became normal, a fact observed by his attendants.

On November 20, 1922, it was reported that the patient's mental condition had re-

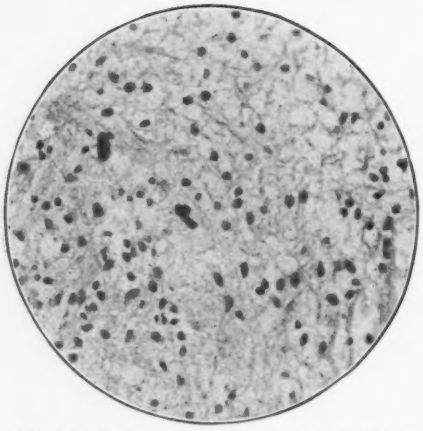

Fig. 6-A. Same as preceding magnified 470 diameters. Ocular 4X. Objective 2.

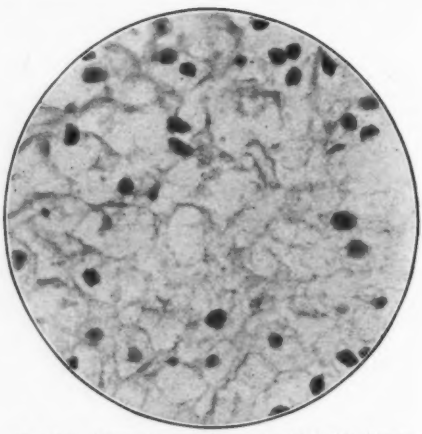

Fig. 6-B. Same as preceding magnified 710 diameters. Ocular 8X. Objective 2.

trogressed to the former state and appeared hopeless.

On April 1, 1923, nine months after the operation, to the great surprise of the author, the patient presented himself to extend his Easter greetings. He had gained considerably in weight, his general appearance was brighter, and his gait was much more steady. He could never remember the writer's name on former occasions. At this time I said to him, "Harold, do you know my name?" and without hesitation he answered "Yes." I then asked "What is it?" and he immediately answered "Thorek."

He was photographed on this occasion and the general appearance compared with that when he was first admitted to the hospital.

There was evident a considerable retrogression of the thyroid enlargement, his neck being apparently normal, and the change in his general appearance was marked.

Prior to the transplantation the patient had a great desire and tendency to destroy things, particularly by burning. He always built fires in the yard, using as fuel satchels, books and anything he could lay his hands on. This destructive tendency had entirely disappeared. His great tendency to be disobedient prior to the operation had given place to calm and obediency. His mother said, "I have not the trouble with him I had before."

He was greatly improved but still had periods of depression during which he became melancholy and introspective. The aural hallucinations had all disappeared. Another transplantation was suggested and about ten months after the primary operation the patient was readmitted to the hospital. At this time the thyroid tissue was transplanted into his own thyroid and a testicle was implanted at the site of the previous testicular implantation. The first testicle implanted was found very much shrunken in size but thoroughly vascularized and apparently alive.

A small section was removed for the purpose of microscopic study, hardened in formol, and after imbedding in paraffin, sections stained with hematoxylin and eosin, the findings were as follows: (Figs. 5-A and 5-B, 6-A and 6-B). In the second of small magnification one observes tissue of the syncytial type first described by Ribbert and later by Retterer and Voronoff: The cellular elements are composed of large protoplasmic cells surrounded by areolar shaped syncytium. The vacuolization is very marked. There are many leukocytes and an abundance of Leydig cells, the nuclei of which are dark and stained dark. In some places the nuclear stain of the Leydig cells is not so intense but appears lighter.

The patient left the hospital a short time after the operation and a diligent effort to locate him after some years failed.

Comment

I believe that the studies of Mott and others have clearly pointed the way to the proper source or pathogenetic site of dementia precox. Other factors responsible for the untoward influence on spermatogenesis and the Leydig cells must, of course, not be overlooked. It is possible that in sex-gland transplantation we have a therapeutic weapon with which to ameliorate and perhaps combat, in well selected cases, this disease. Further experimental work and research will, in the opinion of the writer, yield a great deal of the necessary information in this obscure field of neuropathology.

The late Bayard Holmes, who so greatly interested himself in dementia precox, assumed that intestinal toxemia is partially responsible for these cases. He therefore counselled appendicostomy with colonic lavage, and reported some very encouraging results. I have combined his method with sex-gland implantation in some cases and have had rather striking results in some instances.

The thought presents itself—may not intestinal toxemia so alter the delicate gonadal function as to result in a secondary mental deterioration? If this be true, Bayard Holmes was a pathfinder and his methods, coupled with the method of the late Frank Lydston and the one I propose, may prove of value in this group of unfortunate cases. To sit by and let nature take its course in these cases is hardly the proper thing for the scientist to do. Let us study and endeavor in these cases to do our utmost, for they often mean so much and promise therapeutically so little.

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Influence of Rectal Disease Upon Other Portions of the Digestive Tract

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THE co-existence of rectal disease with disturbance of other portions of the intestinal tract cannot always be explained on the basis of accident; and rectal disease is so often associated with foci of infection in the mouth, or with gastric or duodenal ulcer, cholecystitis, chronic appendicitis and colitis, that it seems there must be a biologic connection.

The veins of the rectum and sigmoid correspond to the arterial tree, beginning in the plexus of vessels surrounding the anus and returning through the portal system and liver before entering the general circulation. This may explain the possible transmission of infection and emboli from suppurative processes in the anorectal region to these structures and the etiologic source of some of the pathologic conditions found in the upper intestinal tract. Gastrointestinal disturbances, such as constipation, flatulence, abdominal distention, nausea and at times vomiting may occur without local, painful manifestations in the rectum, just as infectious foci in the mouth may exist without causing local irritation.

Sympathetic and Parasympathetic

There are many interesting syndromes in the gastrointestinal tract, expressed on the part of both the sympathetic and parasympathetic systems, which should be considered from the standpoint of action or inhibition of action and classed according to whether such activity belongs to the sympathetic or parasympathetic neurocellular mechanism. All symptoms which represent increased muscular or secretory activity of the gut proper (excluding the sphincters, which bear opposite innervation) are due to predominance of parasympathetic activity. Among such may be mentioned hypersecretion in the stomach (hyperchlorhydria) or intestinal tract and hypermotility, leading to such conditions as diarrhea, mucous colitis, colicky pains and spastic conditions of the intestinal tract.

Conditions of disease affect the physical being through stimulation of nerves, resulting in reflex action which causes a disturbance of function. This action expresses itself strongly through the vegetative nervous system because this is the system which presides over unconscious activity and consequently controls the most important functions of the body. It also alters the secretions of the endocrine glands and changes the chemistry and physics of the cell, all of which alter normal physiologic activity.

Spasm and irritability of the anal sphincters retard peristalsis and thereby interfere with elimination of feces. Intestinal toxemia is a form of blood poisoning induced by the absorption of toxins from damaged intestinal mucous membrane, and anything tending to cause retention of intestinal contents in any portion of the intestines longer than nature intended produces stagnation, with subsequent bacterial invasion of the tissues which are not physiologically fitted to withstand their corrosive action.

This terminal stage begins when a greater quantity of toxic or poisonous material than can be disposed of by the liver and other protective organs has entered the blood stream. The absorption of toxins begins gradually to make itself known when the active elimination and physical exercise of youth have been replaced by sedentary habits and the infirmities which naturally result from incomplete excretion and the absorption from a diseased bowel.

The gastrointestinal tract has many points where stagnation, putrefaction and the formation of toxic substance have their origin.

Spastic Constipation

A considerable number of cases of constipation are of the spastic type and the spasticity occurs distal to the splenic flexure of the colon. A rectal examination in many of these cases reveals some anal or rectal pathologic changes which contribute to the intestinal toxemias. A patient suffering from anal fissure, for example, delays defecation as long as possible to avoid the pain accompanying the act. Constipation is sometimes induced by hypertrophy of the sphincter or levator ani muscles, or of Houston's valves.

Fecal impactions should not be ignored or overlooked as a cause of constipation. On the other hand, a person afflicted with stricture exerts himself to the utmost to empty the bowels, but fails to do so because of the obstruction. The first symptom of cancer, in the majority of cases, is constipation, either alone or alternating with diarrhea, accompanied by digestive disturbances, usually of a gaseous nature. This stage may exist for some time, during which various circulatory symptoms make their appearance, misleading the patient as well as the physician.

Such conditions may be influenced through the inhibitory action of atropine upon the vagus, or through stimulation of the sympathetic neuromuscular mechanism by epinephrin or by calcium, which has a tendency to increase the action of the sympathetic nerves so that they may depress the vagus action to such a point that equilibrium may be again restored.

There are also certain sympathetic syndromes on the part of these structures which need to be considered, such as the hyposecretion and hypomotility, represented by the slow digestion and constipation which accompany the acute toxic stage of infection. This is explained by the fact that the toxins act upon the sympathetics and overbalance the action of the parasympathetics, represented by the vagus, destroying the nervous equilibrium and producing a predominant sympathetic effect. The same neurocellular condition exists in chronic hyposecretion and hypomobility and likewise results in relaxation of the bowel and constipation.

These conditions may be improved, at least temporarily, by the administration of sodium or magnesium salts, particularly the sulphates, which stimulate the vagus mechanism and cause an increase in glandular secretion and an increase in muscular contraction. Such conditions may also be influenced at times by general stimulation of the parasympathetic system with such drugs as pilocarpine.

Visceral Pain

While the viscera may be insensitive to many stimuli which would cause pain if applied to the skeletal sensory nerves, yet they are capable of expressing pain through the skeletal sensory nerves when irritated, as is frequently seen in disease. The mechanism by which somatic pain is felt when injury is done to a sensory nerve is by the harmful impulse being carried centralward and being transferred through intracentral paths in the cord and brain until perceptive centers are reached. Not only is the individual made aware of the pain, but he also locates it in the area supplied by the sensory nerve which receives the irritation.

Visceral pain, on the other hand, is pain caused by stimuli arising in an internal viscus which is referred and felt in the areas supplied by the skeletal (somatic) sensory nerves. The perception centers are made aware of it in the same manner as they are made aware of somatic pains, but instead of perceiving the pain as occurring in the viscus, they recognize it as being in the sensory skeletal nerve or nerves whose cell bodies are so arranged in the central nervous system as to be rendered irritable by the stimuli which are transmitted over the afferent sensory nerves coming from the viscus in question. The referred pain from the viscera is produced by transference of the sensory impulse from the sympathetic sensory to the spinal sensory neurons, and from the vagus sensory neurons to the sensory neurons of the fifth cranial nerve (trigeminus). When the stomach is inflamed, the pain is in the epigastrium; when the small intestine, the pain centers lower, about the umbilicus; and when the colon,

the pain is still lower, between the unbilicus and pubes.

Sympathetic connector fibers for the colon come through the lower thoracic and upper lumbar segments of the cord; those which supply the cecum, appendix, ascending and transverse colon, find their motor cells in the mesenteric ganglion; while those which supply the descending colon, sigmoid and rectum are in the inferior mesenteric ganglion. The nerves for the descending colon probably arise from the left half of the cord, for the reflexes are on the left side of the body.

As in other portions of the canal, sympathetic stimulation relaxes the musculature (except the internal anal sphincter which it activates), lessens the secretory activity of the glands and produces vasoconstriction or vasodilation according to the character and strength of the stimulus.

The Innervation of the Sphincters

In the innervation of the gastrointestinal tract, the parasympathetics are the activating nerves for both the smooth musculature and the secretory glands, while the sympathetics are the inhibitory nerves. This holds true for all parts of the digestive tract and those structures formed from it, such as the respiratory tract, the liver and pancreas, and part of the genitourinary tract, with the exception of the sphincter muscles.

The anal sphincter is a law unto itself. Irritation of the sympathetic nervous system causes its contraction, and the only thing that will open the sphincter is the passing down of a proper peristaltic wave.

The anal outlet is under the control of the sympathetic nerves and when this nervous control is interrupted the peristaltic action of the colon ceases, thus allowing accumulations to take place, affecting different parts of the body through the absorption of toxins. Taking laxatives does not remedy the trouble for they simply irritate the glands of the intestinal canal and bring out more liquid which flushes out the new material while the old concretions remain in the colon undergoing absorption and poisoning the whole system.

The sigmoid corresponds to a trap under a sink, with this exception, however, that when the sigmoid becomes filled it will automatically empty itself into the rectum, and this is when we have our first warning that there is something to be evacuated. The disarrangement of this beautiful automatic action brings about general stasis of the whole colon, and more or less accumulation of waste material remains permanently in the rectum, sigmoid, transverse colon and cecum.

Constipation with rectal disease may be explained on the theory of interference with Keith's neuro-muscular sphincters. An irritable focus at any one of these nodal points, as in the anal region, may send impulses through the splanchnic nerves, which communicate with the remaining sphincters in the large and small intestine and thus block peristalsis. This may be followed by atony of the intestinal wall.

The connection between the several centers (a) anal; (b) pelvic colon and rectal; (c) transverse colon; (d) ileocecal; (e) duodeno-jejunal function; (f) duodenal and, perhaps, (g) the cardiac sphincter can sometimes be demonstrated by radiographic examination of cases with rectal lesions. These anatomic lesions are in keeping with the symptomatology.

Secretion and Motility

There are two factors underlying all functions of the alimentary canal; secretion and motion. Each section of the digestive tube in turn, with its particular secretion, performs its task and passes its contents onward for the next step; the body appropriates what it needs and the rest is passed out. With these functions of secretion and motion acting normally, we have no more thought of the stomach and bowels than of the spleen and lungs. When either function is perverted our attention is called to the abdomen by aches and pains, or else some part remote from the digestive canal notifies us of disturbance.

All diseases of the gastrointestinal tract may then be divided into (1) those of perverted secretion, and (2) those of perverted motility. The secretory disturbances are comparatively few in number and even these do not always exist as primary entities. They are frequently the result of lack of motility elsewhere, or are due to a perverted nervous system, as in neurotic hyperacidity and in colica mucosa. The majority of digestive disturbances are those due to perverted motility—flabby muscles. They are the mechanical diseases, and while hypermotility is at times encountered, by far the greater number are due to the other extreme, hypomotility or atony—the inability, more or less complete, of a hollow viscus to empty itself after its chemical functions have been performed.

Regarding the digestive canal as a hollow muscle, we realize the immense importance of normal muscular tonicity in maintaining the correlation of the chemical changes, which follow one after the other. If normal digestion, assimilation and defecation are to be maintained, there must not be undue retention at any point, else decomposition processes begin, or mucous infiltration of the food mass follows, which may render the next digestive step difficult or impossible.

Atonic Constipation

There is an army of people who possess a large, debilitated cecum and ascending colon. This is the weakest part of the intestinal tract, and is often the first point where atony shows itself by delay in lifting its contents into the transverse colon.

We are not dealing with ptoses, Lane's kinks, adhesions or Jackson's membranes, but mere atony of an intestinal tract otherwise normal. These cases of atony of the cecum have occasional pain, suggestive of appendicitis; sometimes the appendix is removed, but the symptoms return as before. The harmful influence of atony in the colon needs no comment. The $5,000,000 the American people spend every year for cathartics testifies to the universality of atony, for nine of every ten cases of constipation are atonic.

Atony is the basic factor in that long series of systemic disturbances dependent on gastrointestinal autointoxication—headache, dizziness, furred tongue, mental lassitude, joint pains, with lowering of mental and physical efficiency.

Beyond these systemic disturbances there are many distinct pathologic entities of the alimentary appendages created by atony. In the wake of an atonic stomach follows hyperchlorhydria, mucous gastritis, ultimately the denuding of the mucosa at the pyloric antrum—ulcer. Atony of the duodenum is followed by infection of the gall ducts, with concomitant disease of the gallbladder and pancreas. Atony of the cecum is the most potent factor in appendicitis. Food decomposition at this point permits the appendix to be flooded and bathed with the pathogenic bacteria of the cecum. The bacteria of the diseased appendix are the bacteria of the cecum. The large number of cases of atony of the colon which come to me with the scar of an appendectomy fully convinces me of the relation of these facts. Cancer of the sigmoid is practically always preceded by atonic constipation. The long-continued and frequent impaction at this point favors denuding; ulcer of the sigmoid is the next step and malignancy the next. Malignancy of any mucous surface in the alimentary canal is the necessary terminus of retention, impaction, bacterial invasion, ulceration.

The last step in the phenomena is made possible by two concomitant factors due to atony and retention, namely, bacterial invasion into and beyond the mucosa and the vitiated nature of the portal circulation, contaminated by soluble toxins of nitrogenous origin. Under such conditions an infiltration and stasis of the lymphatic vessels and spaces is so complete that, when denuding has taken place, healing is impossible from the nature of the blood supply and the lack of lymphatic drainage. If healing be long retarded, malignant proliferation is the next step.

Atony is the first step in the production of adhesions within the abdomen. Retention lowers the vitality of the mucosa, favors the increase of the colon bacillus and paves the way for invasion into deeper structures. My experience has been that adhesions and atony go hand in hand; in those cases where adhesions exist there is always a flabby peristaltic muscle.

The viscera are insensitive, but pain may arise from peritoneal irritations and from tension on the fibers of the muscular coat of the alimentary canal. All pain must be referred on account of the scantiness of the afferent fibers in the viscera and their defective power of localizing internal sensations.

Insanity As Seen By The Courts*

By T. C. BUXTON, M.D., LL.B., A.B., Decatur, Illinios

THE subject of medical jurisprudence covers a vast field. The justice of the laws affecting the physician and surgeon is often open to question and the narrow views of the courts, backed by legal advisors and stimulated by the prejudices of the laity, frequently leave us in a deplorable situation.

The physicians themselves are to blame for much of this attitude. Sneering remarks, fault finding, undue and uncalledfor criticisms of one physician by another lead to remarks such as one frequently hears: "You doctors don't stick together. You try to cut each other's throats, not only in your daily practice but upon the witness stand. You disagree intentionally, with a view to hurting your competitors, and then you discredit them in the eyes of the Court and the people."

The law of evidence is of so great importance that the whole case hinges on this one thing, and the sooner doctors find a common ground to stand on and cease to discredit one another by introducing some phrase that means the same but does not impress the listeners as being the same, the better.

The physician is the man to enlighten the Court on all insanity cases and the evidence he gives is either good or bad. If bad, then the whole profession must suffer for it, and the physician who fails in this fails to fill that place which society has set apart for him.

The mind is the storage battery, the receiver and the dispenser of all things that pertain to human life, which makes it a highly complex problem to know how and what it is, and no one will be absolutely sure.

In this study we are compelled to consider all of the various moods, acts and general conduct of persons, normal, subnormal and abnormal. A few of the conditions frequently encountered will be considered.

Depressions, Epilepsy and Hysteria

Hypochondria, produced by grief or physical disease, is a morbid condition and many times the victim of this affection feels that he has been unjustly wronged and makes assaults and murderous threats against his supposed enemies. He accuses persons of plots to kill or poison him.

In the judicial scrutiny of such cases it is essential to inquire how far and for what length of time the person's mind can be directed from his feeling; what he thinks of his own condition; whether any insane ideas possess his mind, and, if so, what. The judge, in passing sentence, will take into account the morbid impulse which was a subsidiary cause in the commission of the crime. Hypochondria, in its primary form, does not judicially divest the sufferer from responsibility.

Nostalgia or "homesickness" is a variety of melancholia and is very difficult to differentiate, in many instances, from hysteria. Not infrequently we find persons suffering from nostalgia committing acts of violence, such as murdering young children, setting fire to buildings, and committing other depredations. Fortunately, this is not always a disease of the mind, and the physician here has his chance to demonstrate his powers of differentiation.

Of all the passions that come under the care of the physician and within the scope of forensic medicine, it is probable that *fear*, whether sane or insane, gives him the greatest concern.

In the making of a will, if the slightest hint is advanced that the person making the will was acting under fear of any kind, the courts will inquire carefully into the matter and if there is the semblance of evidence to that effect the will will be set aside. In criminal cases the question presents itself even more acutely and if a person under the influence of fear kills another to avoid, as he sees it, a greater evil, that person, acting under such circumstances as may pervert or stimulate emotion, memory, perception, conception, abstraction, judgment, and imagination, is in an abnormal condition.

Epilepsy affects the mind of the sufferer, and a careful observation should be made to detect any criminal indications, for many such sufferers develop very rapidly a murderous instinct and may do great bodily harm, either to themselves or some innocent person.

When a sentence is pronounced upon one of these unfortunate persons, it is advisable to have a duly authorized alienist examine

*Read before the Academy of Science at Springfield, Ill., Feb. 22, 1925.

him for genuine insanity, previous to the execution of such sentence. Marc says, "All epilepsy warrants, upon the event of a criminal act, the suspicion of a mental disorder."

"Epilepsy, judicially," says M. Bordeau De Caselnau, "destroys the power of justly estimating these prejudices, of duly appreciating their foundations, or resisting the extravagances to which they tend."

Atmospheric conditions have a great influence upon the flow of blood to the brain and it is a well recognized fact that more persons are received at the insane asylums during the "dog days" than at any other period of the year, and those whose minds are affected by some abnormality are more likely to show it during this period.

Somnambulism and *nightmare* are so nearly alike that they can be discussed together. In the forensic treatment of these conditions, it is important for the Court to consider whether the person so suffering was properly aware of his condition and its possible consequences, so as to be able to take precautions against untoward acts. It is not to be considered as an intensified dream, but must be treated as a morbid independent state, and, from a legal point of view, every act shown to have been committed under its influence is to bear no relation to voluntary moral agency. This condition is not to be confused with *somnolentia*, where the person is suddenly aroused and commits an act during his waking spasm. The courts have held such acts to be beyond the control of the person and unpremeditated.

Dr. Rush says, "A dream is a transient paroxysm of delirium, while somnambulism is a higher degree of the same disease, or a transient paroxysm of madness." The writer does not wish to set up his judgment against that of Dr. Rush, but many problems have been solved when the subconscious mind was in action, and the person in that state could not be classed as acting during a period of madness, though the brain may have driven the muscles to act in a subconscious manner.

Depression of mind may lead to absurd opinions and insane ideas about religion and other matters, though this form of insanity ordinarily does no harm to any one except the sufferer himself.

Hysteria, a common but specific type of insanity that gives the physician great concern in his daily practice, attacks only females and males with a feminine organization and greatly resembles hypochondria in its mental effect and moral symptoms.

Attention has been called to the fact that persons of this class sometimes tenaciously cherish delusions and hallucinations that they have been subjected to sexual wrongs by others. The importance of this condition lies in rape cases and extra-marital pregnancies, where doctors, laymen and minors are often accused of these crimes and semi-crimes, there being no true basis for such belief. There is no doubt, where such a condition arises, that the acts of the person so suffering are guided by the delusion, and they are, therefore, not responsible for any act committed under such circumstances.

Hysteria itself will not, however, be regarded as suspending the moral agency of the person unless it is proved that the mind has been affected to the extent of unaccountability.

Physical Insanities

The naturalness with which some persons *lie* is positive proof that they have an abnormal conception of their surroundings, and their inability to tell the truth is no fault of their own, but is a physical abnormality of the brain. The lying propensities of a child are often painfully brought home to the parents, but all persuasions, punishment or care will not cause the child to speak the truth. Either he sees things differently or his imagination carries him beyond the truth in every case.

The law does not excuse a person for being a born liar and does not recognize this physical condition, as many persons learn to lie very readily when they have grown to maturity. Up to now this dreadful abnormality seems to be beyond any successful treatment.

Another form of insanity which can be, but seldom is, treated successfully is *satyriasis*. This condition, being classed as immorality, is seldom carefully studied, and those persons who suffer from a stagnated mind condemn the sufferer for being so afflicted, as though he were normal and to blame.

This condition is far more prevalent than the unobserving scientist or student recognizes. Many rape cases are due to this abnormal propensity. The female comes into the pathway of a satyrist or lays herself liable to an attack, and the attacking male acts involuntarily. Such acts are the result of an abnormal condition which is not a disease (though disease sometimes produces it), but a natural physical insanity.

There is nothing in the history and practice of medicine that requires the skill of

a careful physician as do *rape cases*. There are two forms of rape; statutory and genuine. No doctor can afford to shirk the legal responsibility resting upon him in caring for such cases of physical insanity. Within the reach of the physician alone lies the truth, and only through his knowledge of his legal duties can justice be done. In all true cases of rape, the offender should be held under observation, carefully watched and guarded, examined and the circumstances inquired into.

Nymphomania, a condition of the female where the sufferer cannot restrain herself from committing sexual acts, is classed among the moral insanities, though the question of morality has nothing to do with the condition, it being purely a physical abnormality—a physical insanity. These unfortunates are condemned by persons who never look into the real causes of action, and the physician also too often ignorantly overlooks the cause, or he is suffering from a comatose condition and his mind is fast becoming sterile. Perchance a jury should be summoned to inquire into the status of *his* mind.

Such sufferers require protection, and no one is so well able to protect them as the family physician. He should be the intermediator for such persons, as there are many people in every community suffering from *insanitas religioso*, who feel it their duty to condemn them for their immorality. When the true situation is disclosed in a proper manner, the whole field will be cleared and such sufferers will be tolerated, the same as idiots and imbeciles, and eventually a law will be passed that will permit them to be treated and cured.

The abnormality known as *kleptomania* is another physical insanity fairly common in every community. It is usually incurable and, when once the condition has been established in a court of record, acts of such persons are no longer considered as criminal but should be looked upon as a debt to be paid by the guardian or conservator.

Pyromania is, in most instances, a physical condition, the person being born with the peculiar desire to see fire burn and never harboring any ill will toward the person to whom the property belongs. Care should be used here to ascertain whether the condition is a genuine insanity or merely a physical abnormality. It is the physician's duty to study this condition in trying to ascertain criminal responsibility.

There are many things that make pyromaniacs, each case being a study within itself. If it is a physical abnormality—a physical insanity—then it becomes the duty of the physician to notify the parents of the child, and if he fails to do so he is not fulfilling his duty as a true guardian of public health and human peculiarities.

Dipsomania is so common that we may pass it by with the statement that fully half of these unfortunates erroneously trace their morbid desire to a time when a physician prescribed whisky or other alcoholics. This condition is inherent, like the other physical insanities, and overindulgence in alcoholics is a symptom and not a cause.

Religious Insanity is a condition that physicians must handle as carefully as they do a new-born babe, as it is a subject so delicate that to trample upon the supposed rights that a person has as to his religious beliefs may cause the physician himself to be judged insane, by an insane jury of religious fanatics.

There is little doubt that a person of this type, suffering from too long and close a study of religion, believes that he is justified in his acts, and many times he undertakes, under this delusion, to sacrifice his own children in his efforts to satisfy his God. There is, however, no question that a firm and normal belief in religion makes men better, creates new hopes, builds up new qualities and is more useful to mankind than all other qualities or powers.

In conclusion, you will find that studying this synopsis will help you in your work as an expert witness in all cases, and that when you have gone further and mastered the science fairly completely you will be able to do the courts and the people a great service.

Notes From the Clinical Session of the American College of Physicians

Reported by GEORGE B. LAKE, M.D., Chicago

ONE of the most important and valuable medical meetings of the year is the Annual Clinical Session of the American College of Physicians, because here are gathered the most active and enthusiastic internists from all over the United States and Canada. They come to *work* and they *do* work—clinics at the various hospitals from 8:45 A.M. to noon or later and lectures from 2:00 to 5:00 and from 7:00 to 10:00 or 11:00 P.M., for five days.

The session this year was held in Cleveland, Ohio, the fifth city in the United States and the home of Western Reserve University, whose medical school is doing good work. Cleveland's hospital and hotel facilities are excellent and it is here that Dr. Crile's famous clinic is located.

The hospitals were divided into three groups: the University Group, consisting of the medical school and the Babies' and Children's and Maternity hospitals; the City Hospital Group, comprising the Departments of Medicine, Neuropsychiatry, Dermatology and Syphilology and Pediatrics and Contagious Diseases; and a third group in which were listed the Lakeside, Charity, St. Alexis, St. Luke's, St. John's, Mt. Sinai and Cleveland Clinic hospitals and the Cleveland Clinic Building. Dr. Crile himself was, unfortunately, out of the city.

The clinics at these hospitals were, of course, so numerous that one person could attend only a few of them, so that each had to take his choice. Brief reports of several of these clinics will appear under "Clinical Notes and Practical Suggestions", from time to time. On two days the work at the hospitals proved so fascinating that I stayed most of the afternoon, thus missing some of the lectures.

The material presented at the afternoon and evening meetings was abundant and of high quality and I have tried to report briefly the practical "high spots" of several of the more important papers.

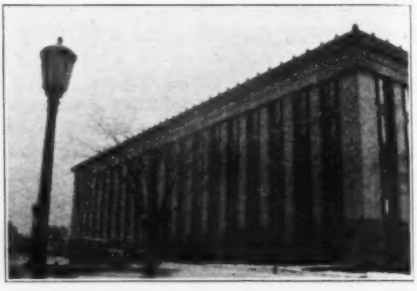
At this session, Dr. Frank Smithies, of Chicago, was installed as president of the College.

Diphtheria Toxoid

By Prof. J. G. Fitzgerald, Toronto Canada

Antigens are large, colloid bodies—complete proteins— foreign to the human body, and may be rather various in character. Fats and lipoids, while they may belong to this series, have not yet been demonstrated to act in this way.

In 1923 a formalized toxin was introduced and has since been improved by the addition of a heat treatment. This is an *atoxic toxoid*, which possesses flocculating and antigenic properties, produces immunity in animals and is innocuous to human beings. This toxoid is less stable but more powerful than the toxin-antitoxin mixtures and produces less reactions than the latter.



Medical School, Western Reserve University

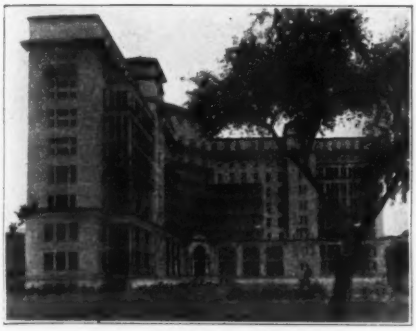
Toxoid has been given to 12,000 children, all of whom developed immunity within 2½ months, following 2 doses of 0.5 and 1.0 cc. respectively, at an interval of one month. Only 2 or 3 percent developed general reactions. About 25 percent showed slight local reactions. The probability of reactions can easily be determined in advance. Inject 0.1 cc. of toxoid, intradermally; if the resulting erythema exceeds half an inch in diameter, do not give the toxoid.

It is well to remember that children are less susceptible to reactions than are adults, and to give the treatment before the age of 6 years. It is more satisfactory in every way than are the toxin-antitoxin mixtures.

Mucous Colitis

By J. D. Dunham, M.D., Columbus, Ohio.

Since autopsy has frequently demonstrated that, in cases of socalled mucous colitis,



Main Building, Cleveland City Hospital.

there are no signs of actual inflammation, that term is incorrect and the term *colonic vagatonia* is more accurate and descriptive. Cabot called it "colica mucosa" and it has been given a variety of other names.

A wide variety of conditions have been assigned as the causes of this disease, including certain bacteria, diet, deficiency of vitamine C, endocrine disorders, etc., but, 55 years ago, Da Costa described it correctly as a dyscrasia of the vagus system. It may be produced by anything which will give rise to this condition, such as worry, marital infelicity, unsatisfactory sex relations and the like.

The *diagnosis* is not obscure in most cases. The objective symptoms of frequent stools, consisting largely of mucus and often containing casts of the bowel, are classical and can be found in any textbook. Nervous symptoms predominate—neurasthenia, hypochondriasis, sitophobia. Sigmoidoscopy, which should always be done, invariably reveals more or less spasticity. *If blood is present in the stools it is NOT mucous colitis.*

The *treatment* is almost as various as the observers, but experience has shown that, in most cases, the less physical treatment is given, the better. A bland, nourishing diet and *avoidance* of all irrigations and other local measures is all that is required. The only drug to be considered is belladonna, which sometimes helps.

As the disease is, in reality, a psychoneurosis, the treatment should be directed to the psychic conditions. These should be carefully analyzed and any conflicts and distressing reactions cleared up, after which suggestion should be used and the patient reeducated for life from a new standpoint, especially teaching him to avoid introspection.

Tumors of the Spleen

By E. B. Krumbhaar, M.D., Philadelphia, Pa.

Neoplasms of the spleen are decidedly rare and there is evidence to the effect that there is something in splenic tissue which counteracts tumor growth. Moreover, the lymphatic supply of the spleen is very slight, being confined to the region of the capsule, so that lymphatic metastasis would be difficult.

In a series of 6500 autopsies performed during the past 6 years we have encountered 39 tumors of the spleen. Two of these were benign; 12 were sarcomas—4 of the melanotic variety; 4 were primary and 21 secondary carcinomas — tumors of hematogenous distribution.

Symptoms, if present, are usually referred to the left hypochondrium. If there is perisplenitis, pain will be present. Primary tumors usually show some enlargement of the spleen and nodules on the organ can sometimes be felt. Gastric symptoms have been noted, and pleural effusion or ascites are said to be present in about 20 percent of cases. In this series no symptoms were present and antemortem diagnosis was not made. This is, in fact, of importance only in primary tumors, where an early diagnosis may lead to a life-saving operation—splenectomy.

Recognition of Cancer of the Rectum and Colon

By F. B. Cross, M.D., Brooklyn, N. Y.

Cancer of the rectum is a surgical disease, but the diagnosis must be made by the general practitioner if the surgeons are to get the cases early enough to do them any good. At the present time we find that 11 or 12 months elapse between the time when the patient first begins to notice symptoms and the time when he is hospitalized. The average age of these patients is 51 years, though cases are seen in persons as young as 18 or 20 years. Men furnish 42.9 percent of the cases and women 57.1 percent.

The *onset* of this disease is insidious. Early symptoms are: Indigestion, pain, loss of strength, blood in the stool and the presence of a tumor, the last-named, however, developing rather late.

The indigestion has, at first, nothing to distinguish it from a functional case; but if it *persists*, and is accompanied by gas in the bowels *before breakfast* and *colicky* pains, referred to the epigastrium, the right or left hypochondrium or other part of the abdomen, a *complete* gastrointestinal history must be taken.

If the neoplasm is in the rectum, there will be considerable pain during defecation. The pain may even simulate that of subacute appendicitis. Bowel movement will be greatly altered in regularity. If there are early morning stools, consisting of mucus and blood, or if there are efforts at defecation producing no result, accompanying any of the symptoms mentioned, the stools must immediately be examined *in full detail.*

Chronic gastrointestinal obstruction developing gradually, suggests cancer, and so do unexplained vomiting in those of cancer age; griping pains in the belly, recurrent or persistent; residual gas in the bowels after an enema; irregular constipation and diarrhea, recurring at intervals; unexplained anemia with gastrointestinal symptoms; and bleeding from the rectum.

Every discharge from the rectum calls for a *complete* examination: and every abdominal examination should include a careful study of the rectum, including sigmoidoscopy and fluoroscopy, provided no stenosis is present. The proctoscope should be used as a routine measure.

Simple inspection will sometimes show visible peristalsis. The x-ray will disclose filling defects, especially in the rectum and pelvic colon. Latent and mild cases are, however, very hard to diagnose. Differentiation must be made from chronic lead poisoning, syphilis, tuberculosis, ulcerative colitis and several other similar conditions. In extremely suspicious cases, where diagnosis by other means is impossible, an exploratory laparotomy is sometimes justifiable and necessary.

Laboratory Aspects of Diabetes

By C. H. Best, M.D., Toronto, Canada

When insulin and sugar are given to a diabetic, part of the carbohydrate is oxidized and part is deposited in the liver and muscles as glycogen. Insulin thus saves the proteins and fats of the body from being converted into sugar and subsequently destroyed, as the muscles burn only corbohydrates for energy metabolism.

When insulin is given to normal animals, sugar rapidly disappears from the blood, about half of it being burned and half stored in the skeletal muscles. Their *total* metabolism is not influenced, but seems to be concentrated upon the corbohydrates, saving the fats. After large doses, the oxygen consumption and body temperature fall within a short time, and the resulting hypoglycemia causes a breaking down of glycogen into sugar, which is soon lost by the action of the muscles.

Maternity and Babies' and Children's Hospitals, Cleveland

The brain, the liver, the intestines, the skin and the endocrines are not essential to insulin action. It seems to act wholly upon the skeletal muscles, causing the disappearance of sugar.

Arteriosclerosis and Diabetes

By E. P. Joslin, M.D., Boston, Mass.

The diabetic lives and dies in the arteriosclerotic zone; that is, he usually dies between 50 and 60. If he lives long enough he will die of (or with) arteriosclerosis—and so will the rest of us! The question is, do diabetics have more or earlier or different arteriosclerosis than the rest of us?

In pre-insulin days the diabetic lived about 2 to 4 years after his disease was discovered and frequently died of (or in) coma; now many live much longer (Joslin has reported 934 who lived 10 years or more) and die with arteriosclerosis. A few years ago the percentage of diabetics dying of coma was 60 and that for arteriosclerosis 14: Now the former figure is reduced to 12 or 14 and the latter has risen to 47 percent. Of the patients who live five years, 70 percent, and of those who live more than 5 years, 100 percent, show arterial changes.

Gangrene and apoplexy are evidences of arteriosclerosis and the x-ray is a great help in studying the condition of the arteries, but only those which are actually calcified can be seen by this method.

The Jews have diabetes 2½ times as frequently as do other races but we do not study them as we ought. We do not have nearly enough autopsies, especially upon Jews. Ask your patients for their pancreases, when they are through with them! Half the people in the world are now operated upon during life for their own benefit and at the cost of much pain: Why should they hesitate to be operated upon painlessly

after death, for the benefit of humanity?

The diet for a diabetic should be low in protein and high in fat, because proteins tend to cause arteriosclerosis. The best diet for an arteriosclerotic consists of carbohydrates, but we cannot give such a diet to a diabetic. The diabetic is better off without alcohol, though this is probably not a factor in arteriosclerosis. Before beginning the ketogenic diet now recommended in the treatment of epilepsy, examine the patient for arteriosclerosis and then check up on him from time to time, so that we can gain some information regarding the effect upon the arteries produced by such a diet.

Obesity and an excess of fat in the diet and in the blood cause arteriosclerosis, and diabetics die from overfat, coma or arterial disease. A high-fat diet is, therefore, dangerous unless carefully controlled, especially in younger patients who cannot take so much in the way of starches and sugars. We should be careful not to give more fats than can be burned with the available carbohydrates.

The percentage of fat in the blood is high in diabetes, and falls, with the sugar, when insulin is given. Cholesterol, too, is high, and when this is the case it is an unfavorable symptom. There is a definite relation between cholesterol and arteriosclerosis, Aschoff declaring that an excess of blood cholesterol is necessary for the development of atheroma. To reduce the amount of cholesterol in the blood, cut down the intake of fat to the point where the body-weight is normal or *less* and raise the carbohydrate tolerance to 100 G. a day by giving doses of insulin, so that more fat will burn and less be needed to maintain nutrition. Every dose of insulin defers the advent of arteriosclerosis.

The old idea of a diabetic diet considered its relation to glycosuria and acidosis; but now we study its relation to arteriosclerosis, because insulin has enabled us to control the other conditions.

A great deal may be accomplished by means of dietary control in the younger diabetics, but do not make any *sudden* changes in the diet of the older ones. Sugar is the only food which will support an active muscle and an old heart may need more than a younger one which is perfectly normal.

The Pathology of Bright's Disease

By H. T. Karsner, M.D., Cleveland, O.

If one is to get any real grasp upon the management of patients suffering with Bright's disease, one must understand kidney pathology and be able to correlate it with a clinical classification. The following is a simple working outline:

1.—*Nephrosis* (non-inflammatory)
  A.—Acute
  B.—Chronic
2.—*Nephritis* (inflammatory)
  A.—Acute, diffuse glomerulonephritis
    a.—Degenerative
    b.—Exudative
    c.—Proliferative
      1.—Intracapillary
      2.—Extracapillary
  B.—Acute, focal glomerulonephritis
    a.—Healed
  C.—Acute, interstitial, non-suppurative nephritis
  D.—Subacute glomerulonephritis
  E.—Chronic glomerulonephritis
3.—*Nephrosclerosis*
  A.—Arterial
  B.—Arteriolar (Hypertensive)

Acute Nephrosis accompanies or follows the acute, infectious diseases and acute toxemias due to chronic infections and toxic drugs (such as corrosive sublimate), and is characterized by degenerative changes in the kidney without evidences of inflammation.

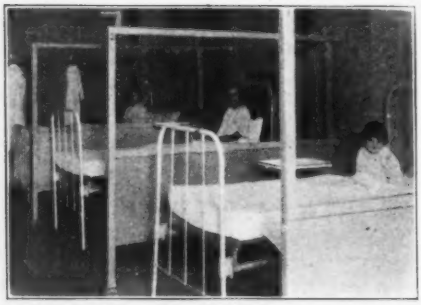
In *chronic nephrosis* there is no elevation of the blood pressure, although all the glomeruli of the kidney are diseased. The commonest forms are *amyloid kidney* and chronic lipoid nephrosis.

All types of *nephritis* show degeneration of the uriniferous tubules, but in glomerulonephritis it is the glomeruli that suffer most. In the acute focal form, which usually follows multiple, septic embolism due to subacute, bacterial endocarditis, the condition of the kidneys, though grave enough, is secondary to the heart condition.

In nephritis there are always changes in the urine, in the blood chemistry (retention of nonprotein nitrogen, etc.), in the kidney function and in the blood-pressure.

Our interpretation of chronic nephritis has changed. In the glomerular form we may find a normal or elevated blood-pressure. If kidney insufficiency is present we know that the glomeruli are involved.

Nephrosclerosis of the arterial type is due to endarteritis and the involvement of the organ is irregular. It is the typical "old man's kidney". Examination shows that there is no retention of nonprotein nitrogen in the blood, nor of dye when making the



Cubicle Arrangement in Contagious and Children's Wards, Cleveland City Hospital.

function test. There may be slight polyuria, but the symptoms are not marked.

The arteriolar type produces a very small kidney, but does no more harm than does the arterial variety. The amount of blood going through the kidney is greatly reduced, but that is not what causes the hypertension we find in these cases. The same changes found in the kidneys are affecting the vessels all over the body. In fact, the hypertension is not due wholly to the condition of the bloodvessels, because it *varies* from day to day, while the vessels do not vary.

Clinical Diagnosis of Biliary Disease

By M. E. Rehfuss, M.D., Philadelphia, Pa.

The liver and the gastrointestinal system are connecting passages and the gall-bladder is a diverticulum on the biliary system. If the gall-bladder is diseased, the liver, also, is diseased, in most cases, and the colon in many cases.

The condition of the bile dominates that of the gall-bladder; the condition of the liver and the portal circulation determines the character of the bile; while abnormalities in the digestive tract will render the portal circulation abnormal. They are all bound up together.

In these cases a careful *history* is a prime necessity, as well as a physical examination. In addition, more or less laboratory work will also be required.

In cases of gall-bladder disease the histories have shown that 59 percent of patients complained of clear-cut pain in the gall-bladder region, while in 21 percent symptoms of toxemia (vomiting, headache, etc.) were dominant. Most of these latter showed local tenderness. Constipation was present in 75 percent of the cases and in *all* cases there was belching—mostly due to aerophagia. Insomnia between 2 and 4 A.M. was complained of by 47 percent of the patients. Thirty-six percent had more or less pronounced cardiac symptoms.

Heavy exercise or riding on the train or in an automobile cause exacerbation of the symptoms of biliary disease, but *not* those of gastric ulcer.

Symptoms in the upper abdomen, *having no relation to the taking of food*, and residual tenderness over the 9th costal cartilage—*outside* the duodenal shadow—following an attack, are very suggestive of biliary disease.

Deformities of the duodenum and pylorus, as seen by fluoroscopy, are, in many cases, suggestive of gall-bladder disease, and visualization of this viscus by the Graham method gives good diagnostic results in 95 percent of cases. The dye may be given by mouth in most cases. When properly diagnosed, medical treatment is usually sufficient. At Jefferson Medical College, operations were performed on only 23 out of 600 patients who had cholecystographies.

The use of the duodenal tube is a recognized method in diagnosis, but it has its limitations. One must be thoroughly familiar with the *normal* appearance of the aspirated bile before he can judge abnormal conditions; and the procedure must be carried out on a patient 4 or 5 times before we can secure valid results. It is helpful when used *in connection with other diagnostic methods.*

Cholesterol crystals in the bile are an evidence of biliary stagnation, and van den Bergh's test (quantitative) for bilirubin in the blood serum is of great value in detecting latent jaundice.

Gastric Ulcer

By Frank Smithies, M.D., Chicago, Ill.

Gastric ulcer is a *systemic* disease, and treatment directed solely to the local condition will always be disappointing. *Syphilis* enters into the picture in many cases.

Any reasonable medical treatment, if carried out faithfully and for sufficient periods of time, with surgical assistance at hand to meet dangerous emergencies if they should arise, should bring about the healing of the ulcer; but no treatment that does not take the *whole man* and the entire situation under consideration can ever be completely successful, and many such treatments offer certain very definite dangers.

Leukemia, Aleukemic Lymphoblastoma, Mycosis Fungoides and Hodgkin's Disease

By A. S. Warthin, M.D., Ann Arbor, Mich.

The diseases included in the title are rare and—so far—incurable.

Tubs for Continuous Neutral Baths, Used in Cleveland City Hospital.

Hodgkin first described a disease, characterized by lymphatic enlargement, progressive weakness, anemia and death and divided into two groups, leukemic and aleukemic. Today, 99 percent of these cases showing swelling of the lymph nodes, emaciation and other grave symptoms are clinically classed as Hodgkin's disease, though pathologically they differ. Some show the blood picture of leukemia and some do not; some grow and look like sarcoma; some show cutaneous lesions (mycosis fungoides), either primary or secondary. Some of these resemble typical Hodgkin's disease (as described by Dorothy Reed) and some look like leukemia.

We must distinguish carefully between these cases and those of secondary carcinoma or sarcoma, tuberculosis, syphilis, and other conditions which have no relation to the diseases under discussion.

Out of 100,000 cases, material from which has been examined in the pathologic laboratory at the University of Michigan, only 506 belonged to this class. Of these, 94 were typical Hodgkin's disease and 83 were atypical; 29 were cases of sarcoma; 6 were lymphatic and 2 myelemic leukemia; 12 were lymphoblastomas of a sarcomatous nature and 134 were aleukemic lymphoblastomas; 44 were atypical lymphosarcomas; and 32 were cases of mycosis fungoides.

In a series of 2,000 autopsies we encountered 5 cases of *chloroma*, and a study of these suggested their neoplastic character. In these cases the lymph nodes are green and we find a green growth on the spine, the sternum and the skull cap. The growth begins in the bone marrow and grows through the bone and periosteum into the tissues. Small eosinophile myelocytes are present in large numbers. It is an *invasive* growth.

It was formerly thought that Hodgkin's disease, mycosis fungoides and lymphosarcoma were infectious granulomas, but now there seems slight basis for this idea. Virchow considered them to be neoplastic, but few now believe them to be so.

Dr. Warthin feels sure that all these conditions *are neoplastic* and are all *related to each other*, because there are transition forms between all the groups and they all run into each other, more or less, sooner or later, and they all arise from a common mother-tissue— the hemapoietic reticulendothelium, especially that forming white cells.

All these cases are malignant. No patient has ever been cured, though one has lived for 17 years (under x-ray treatment), one for 13 and one for 9 years. All are likely to show periods of marked remission, so as to fool physicians and pathologists, but, once the diagnosis has been made, no matter what the superficial symptoms, you know that the disease is going inexorably on.

Newer Treatment of Pleural Effusions

By C. S. Danzer, M.D., Brooklyn, N. Y.

Thyroidectomized animals will not absorb a hypodermoclysis and will not show diuresis after ingesting large quantities of water. In them, and in patients with myxedema, the fluid remains in or passes into the tissues, causing edema.

Pleural effusions are analogous to edema. The fluid which should be excreted remains in the pleural sac. It seems rational, therefore, to give these patients *thyroid preparations*, and the results are satisfactory. Thyroxin may be given, in divided doses, up to 2, 3 or 4 milligrams daily.

If the patient resists the thyroid treatment, the fluids in the tissues may be mobilized in the circulation (where their excretion is possible) by giving an intravenous injection of 20 cc. of a 10-percent solution of sodium chloride.

Diagnosis of Brain Tumors

By C. E. Locke, M.D., Cleveland, Ohio

Brain tumors are found in 1 to 2 percent of all autopsies. If all patients with headache were given an examination of the eye grounds we would diagnose more of these tumors antemortem and save many people from operations upon the abdomen, nose and other organs, performed for the relief of vomiting and headache which are actually due to a new growth in the brain.

Young people with soft arteries, who show a choked disc of more than 2 diopters probably have a brain tumor. Older people, with arteriosclerosis, showing a choked disc of less than 2 diopters, are very likely to be suffering from *thrombosis* or *intracranial hemorrhage*.

Brain abscess develops more rapidly than a tumor; there is usually a history of local infection; and the choking of the disc is less marked.

In *pachymeningitis* the symptoms are paroxysmal and recurrent; not so in tumor. This disease usually occurs in older people; tumor in the younger ones.

Multiple sclerosis shows no vomiting and less headache. The legs are spastic. The eye signs are those of a primary atrophy of the optic nerve, rather than of edema.

Not all brain tumors show choked disc. *Meningeoma*, for example, shows no choking, but is characterized by slow, progressive, localizing signs, with increased vascularity of the overlying scalp. Operative results are good.

Pituitary tumors show primary optic atrophy from pressure on the chiasm, and a diagnosis is made by an x-ray of the sella turcica and by testing the visual fields, where a bitemporal (or, occasionally, homonymous) hemianopsia is found.

The Use of Radium in Treating Impotence Due toLocal Causes in the Urethra*

By LEO C. DuBOIS, M.D., Chicago

IMPOTENCE in the male is the lack of ability to perform the sexual act; or, more definitely, the inability to produce and hold an erection sufficient to consummate the act. Impotence is not necessarily associated with sterility, nor, on the contrary, does sterility imply even a moderate degree of impotence.

The nervi erigentes, situated in the lumbar enlargement of the spinal cord, are the erector centers. These centers may be stimulated by impulses through the brain—as through the sense of vision, tactile sense, etc.—or directly, by impulses from the posterior urethra. The ejaculatory centers working in harmony normally cause ejaculation of semen at the physiologic moment. Any disturbance of one or both of these centers, marked enough to be pathologic, will produce relative impotence.

The causes of impotence are manifold. In the main they may be divided into three general classes: (1) Those due to causes in the nervous system; (2) Constitutional disturbances; (3) Genital abnormalities.

1.—Nervous Disturbances.

A.—Psychic. Among the psychic disturbances are the emotions of fear (as fear of detection, of impregnating, of inability to perform the act, of the effect of prolonged abstinence); memory of previous failure; esthetic sense disturbances (as those due to uncleanliness, disgusting odors, etc.).

B.—Organic disturbances include disease or injury to the brain or spinal cord, tumors, sclerosis, or any destructive process of the spinal cord involving fibers of the erector center.

2.—Constitutional Conditions.

These include the impotence of senility; hypo or hyperfunction of the glands of internal secretion; systemic debilitating diseases and conditions (as diabetes, obesity, tuberculosis, autointoxication, alcoholism, overwork); affections of the testes involving the hormones (as tuberculosis, syphilis, mumps); and the effects of the roentgen-ray

3.—Genital Abnormalities.

A.—Conditions causing mechanical inability to perform coitus—as elephantiasis, marked hypospadias or epispadias, tumors, absence or marked deformity of the penis.

B.—Local pathologic changes, either directly or remotely causing alterations in the normal vascular supply to the membrane of the verumontanum and posterior urethra.

This class of conditions is responsible for a much larger percentage of failure to perform the sexual act properly than has been generally acknowledged, and in my opinion should be given the greatest consideration.

Impotence of this type is usually dependent upon a hyperemic or inflammatory condition of the posterior urethra, causing hypersensitive nerve terminals, through which the lumbar centers are kept in a state of constant irritation, inevitably resulting in nerve exhaustion. The common causes of this end result in the posterior urethra are:

1.—Chronic anterior urethritis, either gonorrheal or catarrhal.

*Presented before the Medical Round Table of Chicago, March 8, 1927.

2.—Stricture of the urethra.
3.—Infection of Littre's glands.
4.—Prostatitis or seminal vesiculitis.
5.—Irritating condition of the urine.
6.—Chronic, passive congestion of the posterior urethra, caused by prolonged and ungratified sex excitement, excessive venery or, in short, any condition that brings an increased blood supply to the posterior urethra and which does not carry away that blood in a normal way or period of time. This condition is not dependent upon venereal disease. In fact, very often it is found in patients who have denied themselves normal sex relations, but have been unable to inhibit the natural impulses and so have obtained a congestion which has been unrelieved and which eventually develops the condition described.

Local Abnormalities

The condition in the posterior urethra consists of two general divisions which blend more or less:

1.—*The stage of increased activity.* In this stage soft infiltration is the most frequent lesion encountered. The mucosa is hyperemic, congested and bleeds easily on the slightest contact. The verumontanum is dark red, swollen, and increased in size. It takes on a smooth appearance and becomes distorted in shape. Very often bullous edema is present and occasionally is quite extensive.

2.—*The stage of diminished activity.* In this stage we find hard infiltration. The membranous region takes on a grayish-red, slightly yellowish color, its brilliant luster disappears and gives place to a dry and dull appearance. The epithelium desquamates freely, so that it may be denuded over a very considerable area, this desquamation being responsible for the bleeding which is easily produced by the introduction of the urethroscope. Vegetations and polypi are frequently found on the veru or some portion of the posterior urethra.

Symptoms.—In the first stage we find increased sexual excitability, nocturnal emissions, premature ejaculation—all the symptoms of an increased irritability of the sexual center. As the condition becomes more chronic and the pathology changes from the first stage to the second, we get the history of diminished libido; difficulty in getting an erection or inability to maintain a complete erection; increasing difficulty in having sexual intercourse; until finally absolute loss of sexual power occurs.

Treatment.—It is easy to see, from the diversity of causes, that it is impossible intelligently to cover the treatment of all types of sexual impotence in a short paper. It is likewise evident that the treatment of the different types would tax the knowledge and experience of representatives of many specialized branches of medicine. So I will attempt to discuss only the type listed under local pathologic changes causing, either primarily or secondarily, due to remote disorders, the various forms of chronic passive congestion of the posterior urethra.

When caused by remote disease conditions it is simple to understand that such conditions must be cared for before attempting any form of local treatment in the posterior urethra. So, if any form of anterior urethritis be present, that must be cleared up by appropriate treatment. If stricture of the anterior urethra is found, either dilatation or urethrotomy must be performed. Involvement of Littre'e glands must be treated by massage over sounds, overdilatation with irrigation of the urethra, or such other local treatment as may be called for. In prostatitis and seminal vesiculitis, these structures must be emptied of infection by massage. Irritating urine must be corrected by proper diet, increased water intake or alkaline diuretics.

With these remote causes corrected, or in those cases in which no outside abnormality exists, there still remains the local condition which, regardless of cause, is essentially responsible for the impotence—the chronic passive congestion of the posterior urethra. This condition has usually been treated by topical applications of silver nitrate, the passage of sounds with deep instillations of weak silver solutions, or some similar method, but the results have been notoriously uncertain and unsatisfactory in many instances. In the search for some more satisfactory method of treatment for this condition the use of radium was brought to my attention.

The Use of Radium

The effect of radium in cases in which there are structural changes in the mucous membrane and its blood supply is particularly selective. Small doses of radium are known to be stimulating to normal tissue growth. In larger doses it has a destructive action on tissue, more selective in cells that are below normal vitality.

Experiments on the treatment of indolent ulcer with radium have been very successful.

The superficial layer of devitalized tissue has been destroyed, while the underlying healthy tissue has been stimulated to increased activity and the ulcer healed. With these experiments in mind and with the knowledge of the effect of radium, in small doses, on mucous membranes, it was hoped that results might be obtained on the abnormal conditions present in the posterior urethra in the type of case under consideration.

In determining the dosage to be used, experiments made with radium on various membranes and surfaces by other observers were taken into consideration. It has been found that 50 milligrams of radium, screened as we have used it and applied to the skin for one hour, shows practically no inflammatory reaction. The same dose applied to buccal or rectal mucous membrane reveals, on cross section of tissue examined from four to twelve days later, a slight lowgrade inflammatory reaction. On the theory that the posterior urethra is covered by a membrane somewhat more sensitive still, we decided on the dosage of 50 milligrams of radium, used for one hour, as the proper amount to obtain the desired effect. In several cases, 100 milligram-hours have been used with no untoward effect.

Method of Treatment.—Fifty milligrams of radium, with 1.4 mm. of gold and 0.8 mm. of rubber screening, are placed in a sound-shaped posterior urethral applicator. After a local anesthetic such as 2 percent procaine has been left in the urethra for ten minutes, the applicator is introduced into the urethra until the tip, with its radium content, rests in the posterior urethra. The applicator is then fixed with adhesive strips or bandages and held in position for one hour, giving the patient 50 milligram-hours of radium treatment. If proper anesthesia has been obtained there is usually no complaint by the patient, except occasionally, slight spasm of the sphincter toward the close of the period. The patient is directed to have no sexual excitement for six weeks and to return at the end of that time for examination.

In the present series, 42 patients have been treated by this method. All of these patients had previously been treated by various other methods, without improvement. Most of them were cases of long standing, many of whom had been treated by numerous other methods over a considerable period of time.

The results in this series have been highly satisfactory. Nearly all of these patients have reported back at various intervals, up to four years from the time of treatment. Thirty-two report a complete return of sexual function, and urethroscopic examination in these patients revealed, at the end of six weeks, a normal-appearing posterior urethra and verumontanum, and, examined at various periods later, showed a continuance of normal conditions. Two cases required a second treatment with radium, with satisfactory results after the second treatment. Six cases required from one to four after treatments with silver nitrate to obtain completely satisfactory results, but these cases reacted to silver after the use of radium, whereas, before, silver had no apparent effect on the condition. Two cases did not return for re-examination and were lost track of.

Precautions

In using radium some precautions must be taken.

1.—If there are any remote causes for the local disease condition, these *must* be removed first, otherwise we get a result which is temporary only and the remote cause will produce a recurrence.

2.—In the presence of infection, radium should not be used. The stimulation produced causes an exacerbation of the inflammatory reaction.

3.—Care must be taken that the radium rests in the posterior urethra and not at the neck of the bladder or too far forward. In the first instance a trigonitis will result which is very annoying; in the second, no beneficial result will be obtained.

Carefulness in differential diagnosis is essential in the treatment of impotence. Radium is not a cure-all; it is not suited for treatment in any but the one type which we have described. However, the large number of cases of this type which are met with in men of comparative youthfulness makes the treatment of the utmost importance. We have a definite disease state to care for and, to date, we have been able, with this treatment, to obtain highly satisfactory results in a large percentage of cases in which, by other methods of treatment, no benefits have been derived.

The treatment appeals to the patient. There is no marked reaction following the application—no discomfort of any kind in the majority of cases. There is absolutely no danger of causing sterility with the dosage of radium used.

Conclusions:

1.—A large number of cases of sexual impotence are due to local causes in the genital tract, causing structural changes in the posterior urethra.

2.—Radium has been employed in a series of forty-two cases of impotence caused by local conditions.

3.—These patients were observed for a variable period, up to four years after treatment.

4.—The effect of this form of treatment was highly satisfactory, resulting in thirty-two functionally perfect results and eight which showed marked improvement. Two did not return and the results are unknown.

5.—Only one application is necessary, in the majority of instances.

104 South Michigan Avenue.

Discussion

By Dr. Meyer Solomon

The psychic factors are of the utmost importance in impotence and are too frequently overlooked by many physicians. There are some who feel that, barring central nervous lesions, such as tabes or paresis, and general diseases like diabetes, there is a strong psychic factor in *every* case of impotence.

It seems quite possible that there may have been a considerable degree of psychic suggestion in the treatment recommended by Dr. DuBois. People in general have a feeling that radium can produce almost magical effects. If these patients were told that radium was being used and were strongly assured that they would get well, we cannot wholly rule out suggestion as a factor in the cures.

By Dr. Burton Haseltine

We must not forget that many cases of impotence are largely or wholly relative. The man who is quite incapable of performing his duties at home may be able to give an excellent account of himself among other scenes and in other companionship.

By Dr. Frank Novak, Jr.

There is a very general impression that procaine, while an ideal drug for injection anesthesia, is of little or no value for topical application. Can Dr. DuBois explain his use of this substance in these cases?

There is also an impression that, in tuberculosis, the sexual desire and power are increased, yet this disease is mentioned as one of the causes of impotence.

By Dr. Maximilian Kern

The endocrine factor in impotence has not been mentioned this evening, and yet it seems obvious that it must be one of the most important matters for consideration. It is an interesting fact that all patients who have suffered with impotence for any length of time show a low metabolic rate. This is highly suggestive.

It is also of interest to note the frequency with which impotence is associated with mutilating operations on the interior of the nose and how common intranasal disease is among prostitutes.

We are only beginning to visualize the part which the endocrines play in all types of disease.

By Dr. Disraeli Kobak

The powers of radium are immense and are very imperfectly understood, and there are other agencies which behave somewhat like it, in some respects. Diathermy in physiologic doses, is stimulating; in overdoses, destructive.

It is not an uncommon experience to have patients who have been receiving diathermy treatments to the prostate tell us that they have noticed a decided increase in their sexual vigor.

If impotence is due to a general debilitated condition, there is reason to feel that benefit might follow general body irradiations with the air-cooled quartz lamp.

By Dr. George B. Lake

There are four great types of impotence: (1) Impotence of desire, or lack of sexual appetite; (2) Impotence of intromission, or inability to make a complete sexual coupling; (3) Ejaculatory impotence, or inability to arrive at the stage of orgasm; and (4) Generative impotence or sterility. The last of these is outside our field of discussion, and it is the second form to which Dr. DuBois chiefly refers and which most people mean when they say impotence.

This second form is the one which excites the greatest consternation in men, but is, of course, relatively uncommon in women, occurring only in the rare cases of vaginismus, total or partial atresia, kraurosis vulvae and like conditions. On the other hand, the first and third form of impotence are relatively very common in women due, I believe, in most cases, to ineptness and lack of consideration on the part of their conjugal partners.

The cases of relative impotence, referred to by Dr. Haseltine, are not at all uncom-

mon and sometimes present very serious problems, from a sociologic as well as a medical standpoint. These cases are practically always psychic in origin and require a full and frank study of all phases of the domestic relations before they can be handled successfully.

Whether the results in Dr. DuBois' cases are due to physical or psychic effects, I know of no other treatment whatsoever which will show comparable accomplishments.

I should like to ask Dr. DuBois if he has had any experience with radon, or radium emanation, in treating these cases; and if he uses any drugs to restrain sexual excitement following the treatment.

Closing, by Dr. DuBois

I have tried to cover only one small phase of the problem of impotence in this presentation, but I believe that we have found something which, in carefully selected cases, will produce highly gratifying results.

Every other causative factor should be carefully ruled out before giving local treatment, of any kind, in the urethra, but after this has been done I feel that we will find a large number of cases showing the local changes I have described.

Regarding procaine, I find that a 2-percent solution, left in the urethra for 10 minutes, will enable me to carry out any ordinary instrumentation without distress to the patient. What does popular opinion matter, so long as it *does the work?*

In the early stages of tuberculosis there may be an increase of sexual excitability, but in the later stages, when the forces of the body are considerably weakened, the sexual power weakens along with all the others.

I have had no experience with radon in these cases.

Drugs have not been used to control sexual desire and excitement. The patients are simply advised to keep away from temptation for six weeks. If, during that period, they experience sexual desire and find themselves able to gratify it (which they have not been able to do for some time) they usually do so, and no harm seems to result.

IT is not to be expected that every one who enters on the practice of medicine will approach his work in a strictly scientific spirit, and with zeal to contribute to the advancement of knowledge, although he must employ scientific methods. It must needs be that the bulk of the members of our calling will, owing to the incessant demands on them, have little time or opportunity for investigation on broad lines. They must be content, willy-nilly, to carry out the day's work with practical skill and common sense, making good use of what they have learned from their teachers and from their own experience. Yet not a few of those so circumstanced make important contributions to medical knowledge.

—Dr. Archibald Garrod.

Surgical Seminar

Conducted by GUSTAVUS M. BLECH, M.D.

[Note: The Seminar is devoted entirely to the practical interests of surgeons. Problems and their discussions are solicited. Contributors must give their names, but whenever desired these will not be published. Questions for this department should not exceed fifty words. Address all communications for the Seminar to Dr. G. M. Blech, 108 North State Street, Chicago.]

Surgical Diagnostics (Continued)

The reagent used in the Guenzburg test has the following formula:

Phloroglucin, 2.0
Vanillin 1.0
Alcohol, absolute, 30.0

The test is performed as follows: A few drops of the reagent are mixed with a few drops of the filtered gastric contents in a small porcelain dish, and the liquid is evaporated by gentle heating over a Bunsen burner, care being taken not to apply more heat than is necessary for desiccation, as otherwise the liquid may become burned to a crisp. In the presence of free hydrochloric acid the dish shows a scarlet-red deposit.

To determine the *total* acidity, place 10 cc. of the filtered gastric contents in a suitable vessel and add a few drops of a 1-percent, alcoholic solution of phenolphthalein. The contents assumes a milky appearance. Now allow decinormal sodium hydroxide solution to drop into the contents from a burette until the red reaction remains permanently. This test must be made while constantly stirring the gastric contents with a glass rod. The index of total acidity is determined by multiplying by ten the quantity of decinormal sodium hydroxide solution used, the multiplication being necessary to express the ratio for one hundred parts of contents. The normal total acidity varies between 30 and 60 units.

Total hydrochloric acid is estimated by this formula:

For every cubic centimeter of the reagent used allow 0.00365 Gm. hydrochloric acid. Accordingly, if 6 cc. of the reagent have been used, we have six times 0.00365 Gms. which, again multiplied by ten to make up for the hundred unit, gives us 0.21 percent —about the normal ratio.

We know that absence or nearly complete absence of hydrochloric acid, and a total acidity below 30 speaks for carcinoma of the stomach; while excess of hydrochloric acid and of total acidity speaks for peptic ulcer.

In for one reason or another stomach contents cannot be obtained, we resort to an expedient known as Sahli's desmoid test. This is very simple, indeed, for all the patient has to do is to swallow a methylene blue pill wrapped in a rubber membrane, which is closed by a piece of raw catgut. In the presence of hydrochoric acid the catgut is digested and the methylene blue is liberated, as is evidenced by the discoloration of the urine the same day or the next at latest.

I shall not refer to the test for lactic acid because, in my opinion, its diagnostic value in carcinoma of the stomach is highly problematical and I embrace this opportunity to point out that reliance on any one or more chemical tests will often lead to diagnostic errors.

Modern chemistry has devised a number of tests of the gastric contents which have a good deal of scientific interest, but as these should be performed by individuals who have had special training in laboratory methods, I shall not enumerate them.

Of some importance to us is the motor function test of the stomach. If that function be normal the stomach will be emptied in from one to two hours after the administration of the test breakfast. If there be residue after that time carcinoma must be suspected.

Examination of the *feces*, bacteriologically and microscopically, is a specialistic laboratory procedure, which, by the way, has only extremely limited diagnostic value. The only test of a practical character is the demonstration of blood in the stools in cases of suspected ulcer of the stomach, duodenum, ileum or colon. The tests for blood in the stomach contents, described in the preceding issue, may be applied also in fecal examinations, provided the patient has had no meat for several days and provided further that feces have been treated with a little glacial acetic acid and water.

No general examination of a patient is complete without at least a routine *urinary analysis*. As these tests can be found in any standard work I shall briefly describe

the methods I use. (See CLIN. MED & SURG. April, 1927, p. 282).

Albumin.—The qualitative test is made by holding a test tube partly filled with filtered urine over a Bunsen flame in such a manner that the upper portion of the urine is brought to a boil. If there appears a cloud, it is either earthy phosphates or albumin. The addition of a few drops of acetic acid dissolves the phosphates, and if the cloud continues or is even rendered more perceptible, we have albumin.

In the case of the presence of albumin, the urine is at once subjected to microscopic examination for casts, pus, etc.

I use the Esbach test for the quantitative determination of albumin only for purposes of observation of the progress of any case. A rough estimate of the quantity of albumin can be obtained from the qualitative test.

I prefer the Haines method for routine examination for *sugar* and attach very little importance to the *indican* test.

What we are principally concerned with in affections of the urinary system is to determine the function of each kidney, for which purpose we watch the 24-hour quantity of urine. The patient is instructed to throw away the first morning specimen and save all other quantities passed, in a large glass vessel containing a preservative (such as chloroform), for 24 hours, which terminates the following morning after the first urination, which must be collected. Functional tests are begun after that.

In the presence of sugar we should decline to operate, in facultative cases, and meanwhile have the laboratory make all the necessary quantitative tests and watch for the presence of acetone and diacetic acid.

The various functional tests will be discussed when we come to speak of the diagnosis of diseases of the kidney.

The question now arises, what blood tests should be made as a matter of routine? and under what circumstances? It is believed that every surgeon should be equipped at least to make a full blood count for the determination of the number of red and white blood corpuscles and for the percentage of hemoglobin. We make our own coagulation tests before sending the patients to the hospital, in order to gain the time for preoperative care, should the coagulation period be very prolonged. All this I shall describe briefly, showing the abnormalities and their indications, even though this may be only repetition of what is already known.

(To be Continued.)

Discussion and Solution of Problem No. 3

Recapitulation (See March issue p. 206). A young, single clerk, with no previous history likely to have any bearing on the present case, had suffered for three days from toothache. He developed a chill and excruciating pain in the right lower jaw, with swelling of the right cheek. External applications gave no relief and a carious tooth, believed by the attending physician to be the source of an infection, was extracted by a dentist, without relief. The progress of the swelling was enough to disfigure the entire right side of the face and forehead, when an abscess of the soft parts around the jaw was diagnosed and the gum incised, which was repeated the next day, but without success.

The next day the patient's condition is so much worse that he is hospitalized, where we are supposed to see him for the first time. The findings are verified as described and the patient makes an impression of one suffering from sepsis with difficulty of breathing amounting to air-hunger.

The requirement calls for the diagnosis, criticism of the treatment so far administered, therapy and prognosis.

Discussion by Gen. Geo. Acheson, St. Martins, N. B. Canada

This is probably a case of what used to be called *Ludwig's Angina*, a diffuse cellulitis of the neck.

The trouble started in an alveolar abscess and the pus, instead of getting free exit through or around the tooth, burrowed deeply into the interfascial cellular tissue of the neck. The mischief was done before the tooth was extracted, and it was impossible to reach the bottom of the infection by any incision through the mouth.

Extraction of the tooth and exploratory incisions of the gum were perfectly right, but just as soon as the inflammatory swelling was seen to be extending below the jaw down into the neck, there should have been free incision through the cervical fascia, and thorough drainage. If breathing is seriously impeded, a tracheotomy may be necessary, but in any event, there should be free incision into the swollen part of the neck.

The rapid extension of the septic inflammation and the danger of asphyxia make the prognosis very serious, and I should say

that, in this case, where the symptoms are already so severe, the chances for recovery are poor.

In addition to attempts to reach and evacuate the pus, the usual treatment for septicemia should be faithfully carried out —stimulants, saline infusion and, possibly, administration of an anti-streptococcus serum.

Discussion by L. I. Moriarty, D.D.S., Watertown, S. D.

I have read the Seminar for three years with much interest, but, being a dentist and not a surgeon, naturally refrained from participating in the discussions. Problem No. 3, however, comes somewhat within the realm of dental surgery, which explains the following presentation.

It appears that an x-ray should have been made to determine the cause and extent of the destruction, which would have enabled both the physician and the dentist to determine the proper procedure. Personally, I am inclined to the diagnosis of dental abscess, followed by probable bone necrosis and septicemia. The problem did not state whether the site of the original swelling was in the mandible or maxilla. If the latter be the case, possible maxillary sinus involvement must be thought of, reflex pains in the mandible being evoked by branches of the 5th cranial nerve. Transillumination plus x-ray would have been helpful diagnostic factors.

Cold packs externally and heat on the inside would have had a tendency to bring the infection to a focus in the gums, where it could have been drained, thereby preventing extension of the process. It must be recalled also that in bone necrosis extraction and curettage are contraindicated.

While the treatment for septicemia is within the province of the physician, I may be permitted to state that I use with success an ointment composed of bismuth subnitrate and iodoform in soft petroleum in combating infection of tooth sockets and bone. I remove the pus whenever possible, pack the infected area for two days, when the packing is removed and renewed. Usually these two applications control the infection and start granulation and bone regeneration.

The prognosis is grave and proportionate to the extent of destruction, the general phenomena and the resistance of the patient.

Discussion by Dr. E. C. Junger, Soldier, Iowa

The chill decidedly indicates streptococcus infection and that being so, extraction of tooth meant no more nor less than adding fuel to the fire. Such treatment is about as scientific or rather unscientific as curetting an infected uterus.

The small incisions made subsequently also did more harm than good. If excision of the infected area, with cauterization immediately afterwards, could not be practiced it would have been better to leave the infection alone. If anything, deep incision from without, followed by the application of hot, antiseptic compresses and irrigations might have lessened absorption and controlled the dangerous toxemia which resulted.

The prognosis should be extremely guarded under any circumstances and, in fact, is rather grave unless absorption of the toxic products can be checked.

Discussion by Dr. Herman J. Kooiker, Albert Lea, Minn.

The problem here presented recalls to my mind one seen a little over six months ago, the origin, development and progress up to the time of hospitalization being virtually identical in both cases, the only difference in the symptoms being that the swelling did not involve the forehead in my case, but extended downward to involve the neck. External palpation showed that the swelling was hard — board-like. Inside the mouth the tongue was pushed up to the roof and the swelling proper had the characteristics of a mass of gelatin. The pain was so intense that morphine had to be administered.

In the belief that incision might relieve the mass in the mouth, we inserted a scalpel, which allowed the escape of bloody serum and gave relief for a short time. We followed this with hot packs of a saturated solution of magnesium sulphate. An ounce of this solution was given by mouth to move the bowels. We also gave large doses of soluble iodine. This happened on the third day after the extraction of the tooth. Our patient, too, was toxic, restless and had great difficulty in breathing and swallowing.

The next day the swelling and difficulty in swallowing increased but the breathing was no worse. Placing one finger in the mouth and counter pressure from without gave a distinct sense of fluctuation. Again the scalpel was inserted with the same result as on the previous occasion. A consultant had nothing new to offer.

Two days later the board-like swelling seemed to soften and the skin appeared yellow in the affected area. Much against

our conviction we inserted a scalpel into the softened site, but we obtained merely a drop or two of pus, and the next day the dressings showed no evidence of suppuration, The softening having increased in the next two days, incision was tried again and this time we obtained about 4 cc. of pus. Drainage now continued and recovery followed rapidly.

To my mind both cases had an infection of an erysipelatous nature, producing pronounced infiltration of the soft parts involved. Cultures, if made, doubtless would have demonstrated a streptococcus.

I have no criticism to make regarding the incisions. We have an analogy for this in the relief obtained by stabbing tonsillar infection even if no visible pus is obtained.

I should resort to the use of erysipelas serum, especially when the symptoms are as severe and alarming as given in the problem. Intubation and tracheotomy suggest themselves. While the prognosis is grave, courageous treatment is indicated and by it many lives will be saved in such cases.

Discussion by Dr. D. H. Nusbaum, Storm Lake, Iowa

This problem is very interesting because cases of this type are not uncommon, and the road to success in their treatment is not always strewn with roses.

There seems to be something missing in the description up to the time of hospitalization, nay, indeed of the very first period, because the question arises what was there in the treatment that caused the patient's condition to become worse within a very brief period?

With reference to the diagnosis, we probably have an infection from the tooth causing inflammation of the periosteum lining the cavity, extending to the deeper structures of the right lower jaw bone, to the soft parts burrowing under the periosteum, muscle sheath and so on, until we have a deep-seated abscess with necrosis of a more or less large part of the body and ramus of the jaw—a diagnosis entirely plausible according to the severity of the symptoms.

With this in mind, the extraction of the tooth after the development of extensive swelling, is subject to criticism. There is then no doubt that the infection has extended beyond the confines of the tooth and, instead of reaching the main trouble, the extraction can only serve to produce exaggeration of the conditions, by opening up new avenues of absorption. This is not only sound theoretically but based on practical experience. Blind stabbing without previous localization of fluctuation is also useless.

At the time of hospitalization, heroic treatment appears indicated, for the case has already advanced to a critical stage and the only hope lies in locating and opening the abscess to secure free drainage. Under local analgesia or general anesthesia an incision should be made through the skin down to the angle of the jaw or where the swelling is most prominent and search made for the abscess and necrosed bone. One may not always be able to determine the presence of bone necrosis macroscopically but the abscess must be found and when this and its branches are drained the immediate danger is over, provided the system does not become flooded by bacteria during the operation.

I shall not waste any time outlining further antiseptic treatment, as this is elementary and a matter of choice with individual surgeons, but I would like to point out that internal medication should not be neglected. The frequent administration of quinine salicylate in large doses has proved effective in my hands. Neutral acriflavine and urotropin are very valuable. General supportive treatment must be added. The prognosis, even at best, is somewhat doubtful.

Editorial Comment

The discussion aroused by this problem has been very interesting, particularly so since the subject represents one of the most serious problems of modern surgery. In my opinion, virtually all infections involving the jaws and sinuses become problems for the specialistic surgeon. Many a human life has been sacrificed partly because the gravity of a given case has not been recognized early enough and partly because the therapy has been ineffective or worse. The man who undertakes to diagnose this class of infections must have a wide experience, and the man who undertakes to treat them must be a thorough anatomist and an excellent surgeon, whose technic is like the knight Bayard *"sans peur et sans reproche"*—bold and faultless.

I have a letter in my possession from a reader in a town of ten thousand, who states that he has seen, in ten years' practice, only one case of jaw infection; that he cut extensively; and that the patient afterward nearly sued him for damages because he divided a nerve which, at the

time of operation, was not recognizable on account of the bloody field. He asks where a general surgeon, who has done all sorts of good work, can qualify for such work as this. I am unable to answer many letters personally, restricting myself to discussing such and similar problems in this department of CLINICAL MEDICINE AND SURGERY. The market is flooded with surgical literature and of late Colonel Lake has been kind enough to let me have a number of surgical books for review, which usually I sign with my initials. I am trying earnestly and conscientiously, not to please the publishers but to serve our readers by pointing out which works are really valuable and which are merely compilations, so that no one need complain that we are not familiarizing the interested readers with the proper avenues of information.

The first and most serious criticism of the case of our problem is that an approximate diagnosis was not made the very first time by the attending physician; that the seriousness of the situation was not appreciated until the phenomena would have been recognized by even a blind man; and that one error led to the most important one, and that is that the patient was not sent to the hospital and placed under the care of a surgeon early enough, for while, in our case, the patient survived, I had very little hope for his recovery.

Infections of the jaw, nine times out of ten, are dental in origin. In fact, in thirty odd years I have seen but a few cases of acute nonspecific osteomyelitis of the jaw due to trauma—and then only during the War—and still less often cases of hematogenic origin. I am glad, therefore, that a dentist has taken part in the discussion, for very often it is the dentist who can prevent such infections. I recall a case in which an acute infection followed crowning. The theory of the tooth being responsible was ridiculed until, by extraction and section, it was demonstrated that there had been an incompletely treated pulpitis, for there was undoubted gangrene of the pulp.

It is good surgery to remove the causative factor—an offending tooth—even in the face of extensive infection. I am sure that on serious reflection both Dr. Moriarty and Dr. Junger will agree with me that surgery of the jaw without removing the primary source of infection is, to say the least, incomplete surgery.

Diagnostically, I have only one clue—the attempts on the part of the attending physician to incise the gums. That leads me to think that the diagnosis was restricted to the soft structures—a gingivitis perhaps—without realization that there was an osteomyelitis.

Had this all taken place in the upper jaw the access through the gums by a suitable incision is, as a rule, followed by success, but in the lower jaw, there is only one route of approach—from without.

Ludwig's angina is a serious phlegmonous inflammation which progresses very rapidly, threatening symptoms often appearing within a few hours. While it is easily mistaken for other infections, such a mistake is no error at all, since early and extensive surgery, such as is indicated in this type of infections, is life saving, for in angina as in osteomyelitis, the danger of thrombophlebitis, sepsis and meningitis is a real one, avoidable only by evacuation of the pus.

Something has been said of erysipelas. The external picture of the swollen skin with a red hue, on mere inspection does simulate erysipelas; but if one add palpation one can easily differentiate erysipelas from osteomyelitis, for in the former pressure against the jaw is scarcely painful while in the latter case the patients cry out from pain.

I come now to the technic of operation. For heaven's sake, let us leave the hypodermic needle alone! for we will never succeed in producing local analgesia, no matter what preparation is used. The first touch with the knife and the patient is liable to jump off the table and prefer death to additional torture; besides, such a violent movement in itself is dangerous. Morphine and atropine, preparatory to ether by the open-air, drop-by-drop method is the sole condition for proper operating on this case. The incision must be made through the soft parts directly down to the bone at the most dependent point, at the lower margin of the horizontal ramus, and the tissues must be lifted off by blunt dissection until the periosteum is freely exposed. It is better not to open the oral cavity, if the situation permits such conservatism.

While there are a number of authorities who demand that the diseased bone be chiseled open at this time, it is sufficient to obtain exposure and drainage from the soft parts and periosteum until sequestra have formed, when attempts at further bone surgery are indicated.

Such early operation renders the prognosis more hopeful. Death from thrombophlebitis, general sepsis or meningitis is the rule in cases treated by nonsurgical or by poor surgical methods.

I am aware that I have only touched the most salient points. The interest that has been aroused by this problem suggests the necessity of taking up this subject again; and the next time, I am sure, our dental friends, too, will find much of interest to discuss.

Problem No. 5

Presented by Dr. M. O. Robertson, Bedford, Ind.

A woman, aged 63, was seen December 13, 1926, and gave the following history:

She claims to have had "rheumatism" for the past thirteen years, but there is nothing to indicate that there ever was an arthritis. The attacks are said to date from the occurrence of a continued fever, at which time she also had her menopause. She was able, however, to attend to her usual household duties up to one year ago, when she began "flooding". A physician at that time diagnosed it as due to a uterine tumor, for which he prescribed. The "flooding" then stopped and the patient is under the impression that her troubles are due to the arrest of the bleeding. Three weeks ago her general indisposition became worse, her principal symptoms being abdominal pain, nausea and vomiting. The patient states that she was never pregnant.

On *examination* we find the following data: pulse, 110; temperature, 99.8°F.; respiration, 22; chest negative; abdomen shows, on inspection, visible enlargement in the right lower quadrant, simulating an ovarian cyst, but fluctuation is not readily made out on examination, the tumor feeling rather hard. The mass was immovable and perhaps larger than a man's head. The fornices appeared indurated, the cervix obliterated and a slight vaginal discharge was free from offensive odor. The examination caused the patient considerable pain.

January 21, 1927, a message reached me that the mass had ruptured externally, discharging a considerable quantity of foul material. I was called in again February 4, and found an opening about three inches in length in the right groin. The mass had almost disappeared. The patient was delirious but recognized me and refused examination. The temperature was 104°F.; pulse 98. The abdomen had the appearance of a diffuse peritonitis, which was draining. She had involuntary bowel movements. Death occurred February 11.

Requirement.—Free discussion, with reference to the probable diagnosis.

AN UNUSUAL FORM OF CYSTITIS

By Dr. R. S. Gregg, Chicago, Ill.

Cystitis is an inflammation of the bladder, due to some infecting organism. It is conceded that the normal bladder is very resistant and rather hard to infect, and when a cystitis is really present it behooves one to be careful in seeking the cause.

The symptoms of typical acute cystitis are so characteristic that the diagnosis is obvious; but we do have the atypical cases where the infection is much more insidious and no history of a preceding acute inflammation is presented, and it is to two instances of this type that I wish to call your attention, for the reason of the importance of the etiology.

Within a period of a few months, I was consulted by two young married women, the complaints of whom were of a similar nature—an insidious onset of pain in the region of the bladder, painful and frequent micturition, headache and malaise. In neither of these cases was there an onset of sudden and acute pain in the lower abdomen and, in fact, no history of a preceding acute inflammation. These patients were young women, married less than a year, not pregnant and with no previous history of illness of any moment.

I had no reason to suspect infection of the pelvis of the kidney with an infection spreading downward into the bladder; and again, I had no right to exclude that possibility. However, the apparent mildness and insidiousness of the attacks permits one to take liberties with his reasoning and proceed along the line of least resistance.

After taking every precaution for cleanliness of the external genitalia and the orifice of the urethra I obtained a catheterized specimen of urine into a previously sterilized container and sent the sample to the laboratory for bacteriologic examination and cultures. The laboratory reports in both cases were very similar:

Pus Cells—Diffuse, 75 to 100 per high power field.

Blood Cells — Moderate number small clumps.

Epithelial Cells—Moderate number.

Other Cells — Absent. *Squamous and Transitional Cells*—Moderate number.

Three Microorganism were present:

Bacillus coli.—*Many.*

Bacillus influenzae—Moderate number.

Saccharomyces, urinal—Few.

Gonococcus — Absent (Gram confirmation).

The urethral mucus was examined in both instances:

Pus Cells—Few.

Blood Cells—Moderate number.

Epithelial Cells—Absent.

Other Cells—Absent.

Microorganisms:

Gonococcus—Absent (Gram confirmation).

Diplococcus pneumoniae—Moderate number.

Bacillus coli—*Fair number.*

Streptothrices—Few.

It was evident from the bacteriologic findings that rather severe local inflammation of the bladder was present. No cells were found that could be ascribed to the kidney pelvis and no pus casts were present to suggests a possible kidney involvement.

While three microorganisms were present, you will note that the Bacillus coli predominated and my conclusions were that this was the offending organism, due to local contamination. Subsequent events have proved my deductions to be correct.

Treatment.—Bladder irrigations with boric acid solution, followed by 10- to 20-percent argyrol solution, instilled into bladder and held for an hour or more if possible. Three to four pints of drinking water every twelve hours were ordered. The irrigations were repeated 3 to 4 times a week, for a period of 2 to 3 weeks.

While the above treatment was necessary for immediate relief, the teaching of the husbands and wives as regards the probable reasons for the contaminations was more essential, for subsequent marital felicity.

The teachings were carried out and scrupulous cleanliness enjoined preceding the connubial embrace.

No recurrence in either case.

SURGERY OF THE HEAD

NEVER be in a hurry with your good prognosis in even apparently slight head injuries.

Do not fail to shave far enough from the edge of the wound to enable you to cleanse it properly.

It has been said "in case of injury to the scalp, the whole head should be shaved"—this is rank foolishness. Exercise judgment. I, for one, would be in favor of fining a man who would shave a woman's head for a trivial scalp wound.

Never shave "against the grain" or use strong antiseptics or too much friction in cleansing a scalp. To do any or all of these is to court infection of the skin—and you may want to do a craniotomy on the same head in a few days.

In all contused wounds fear a fracture. If the skin is lacerated at the same time, cut down, and look for one.

Do not scrub and maul the tissues when trying to remove the dirt from a wound, and avoid strong antiseptics. Use forceps, scissors, and saline spray.

Never close a lacerated wound, here or elsewhere, without drainage.

Remember that scalp flaps do not readily slough. Flaps accidentally torn up should not be cut off. Return them to place after cleansing; drain, and keep warm.

—*Bernays: Golden Rules of Surgery.*

Clinical Notes and Practical Suggestions

Metaphen In Streptococcic Lymphangitis and Adenitis

(A Case Report)

ON Thursday, August 19, 1926, the patient first noticed some soreness on sitting down, resulting from a small pimple on the posterior aspect of the right thigh, midway between the hip and the knee.

On the morning of the 20th, this had become slightly indurated, reddened, swollen, tender and about the size of a dollar; and from this, extending up into the right groin, were two definite streaks, indicating an early infection of the lymphatics draining into the groin. The patient, being a physician, tried to incise this, rather unsuccessfully, owing to its location posteriorly.

At 8 P.M. on August 20, the patient had a temperature of 99.2°F. and felt ill, with a rapidly increasing, diffuse, superficial lymphatic inflammation, extending from the focus on the back of the thigh over a fan-shaped area up into the right groin. At 9 P.M. he visited the chief surgeon of one of the best hospitals in New York City, who freely incised the original focus on the back of the leg and burned the area with pure carbolic acid, to the depth of about half an inch. A half of one-percent phenol wet dressing was applied for the night of the 20th and two very hot foot baths were taken.

August 21. The initial incision was again swabbed out with pure phenol and the wet dressing of ½-percent phenol reapplied to the entire inner thigh and right groin up to Poupart's Ligament. Patient stayed in bed August 21. Temperature taken both times this day was normal. The local condition of the leg, however, was not improved and the swelling in the groin was increasing, as well as the redness and tenderness. This treatment was continued on Aug. 22, but the condition grew progressively worse and the temperature rose to 99.6°F. The surgical attendant pronounced it a virulent streptococcic infection.

At midnight, August 22, at the direction of the patient, the nurse applied a 1:500 metaphen wet dressing over the entire area of the inner thigh and right groin, extending posteriorly so that it covered the opening which the surgeon has been burning with phenol.

After about two hours the leg felt easier and the patient slept well until the following morning, when the groin had a blanched appearance and the sense of tenderness was decreased by 50 percent.

On August 23, he was again dressed by the surgeon, as before, and at 11 P.M., a 1:1000 metaphen solution was used to saturate the entire dressing, which had been put on at 11 o'clock in the morning.

On the following morning, August 24, there was again noted the very definite shrinking of the entire infiamed area, although the cord-like lymphatic channels appeared considerably reddened and easily palpable. The treatment of the fifth day was further supplemented by two hot tub soaks of the right leg, one in the morning and one at night. Following the latter, a 1:2000 wet metaphen dressing was put on for the night. The patient did not tell the surgeon at this time in regard to the use of the wet metaphen dressings.

It was found that resting the leg was of great assistance, as the associated muscle sheaths and tendon sheaths had undoubtedly been affected by the surrounding inflammatory edema and caused a great deal of distress when he tried to walk on the leg.

The area covered by these dressings was very extensive and the metaphen solution was used in full strength (1:500), without any toxic effect, so far as the patient could determine, and without any local discomfort,

even on an area where the skin had already been removed as the result of the wet phenol dressings which had been used the first two days of onset.

The ultimate convalescence of the patient extended over a period of three weeks and an additional week in the country, as his resistance and strength following this infection had been very greatly depreciated.

The patient, who, as before stated, is a physician himself, has used metaphen, usually in a 1:500 solution, in a great variety of conditions, with interesting and satisfying results.

Several things may be mentioned as of interest:

First.—Actual contact with a fresh wound for a period of 12 to 24 hours seems to promote sterilization of the wound, remove the soreness and bring about healing by primary intention.

Second.—The solution apparently promotes tissue growth to a considerable degree, as seen in the rapid development of granulating surfaces in open wounds and ulcers.

Third.—The strength of 1:500 is too irritating for use on most mucous membranes, and here one must try to find the solution which is most effective and best tolerated by the lesion under treatment.

SEYMOUR FISKE,
New York City.

SUN-BATHING SUITS

Sun baths need not be limited to babies. They should be continued throughout the early years of childhood. The more sunlight little children can receive the better they will withstand colds, infections and contagious diseases.

During the summer, many children are taken to the seashore or to the country where sun baths are easily given. On the beach, wearing a sleeveless, low-neck bathing suit, or better still, a pair of bathing trunks, a little child can receive an ideal sun bath. After his body is once well tanned he can play several hours a day on the beach.

In the country, however, or in the city, no one thinks of dressing a child in a bathing suit when he is playing in the fields or in the back yard. A pair of bathing trunks will serve as well for a sun bath in the country or in the city back yard as for a salt water bath at the sea or a fresh water bath at the lake. Sun bathing is much more important than sea bathing or lake bathing, and has the great advantage of being everywhere accessible in summer.

Sun-bathing suits should allow as much skin as possible to be exposed and may consist of a thin, short, sleeveless, low-necked slip or romper or a simple set of sleeveless cotton underwear which will leave the arms and legs and neck bare.

During the summer, clothes for children should be sleeveless and cut low in the neck. Bare legs and sandals should be the fashion from May until October, and children should vie with one another as to which one gets the best coat of tan. Doctor Salesby of London, a great advocate of sunshine for children, urges us, in his excellent book on "Sunlight and Health", not to let fashion dominate our choice of children's clothes.

CHILDREN'S BUREAU,
U. S. Dept. of Labor.

EYE GYMNASTICS

It would not be surprising if, before long, we see criketers consulting eye specialists to improve their batting; golfers to reduce their handicap; and drivers of motor cars to enhance their skill in dodging the traffic.

This is not a mere fanciful suggestion. For some time past flying officers in the Royal Air Force have been sent to eye specialists to have their sight trained. And the success has been remarkable.

One test of a good pilot is the skill displayed in making "a good landing." Many pilots used to fail lamentably in this respect, and this failure was generally ascribed to lack of skill and judgment. But it was discovered that, though these pilots might possess perfectly good vision, they were generally handicapped by a defect in focusing the eyes steadily for near objects. Many men who used to make "dud" landings have been through this course of eye gymnastics, with the result that they have astonished their instructors by making remarkably good landings afterwards.

This condition known as heterophoria is a curable one. The fact that its existence can easily be detected, and generally cured or greatly improved, is of interest to great numbers outside the ranks of aviators. And it is of special interest to all whose pursuits or pleasures demand quick sight, rapid focusing of the eyes on near objects, and the power to maintain them in the focus. Those who can do this have the power to judge angles accurately, and that is one essential in all the games of skill.

This power has nothing to do with the range of vision for near objects or those at a distance. It has solely to do with the focusing or convergence of the eyes. It is a muscular effort of the little muscles that move the eyes, and this can be trained and improved like any other muscular effort.

It is easy, with the aid of a friend, to determine if you have any degree of this defect. If you are a "duffer" at games this defect may be explained.

Try the eyes of a friend or get a friend to try your own. Let him sit in a chair with the eyes directed horizontally forward and facing a good light. Hold a pencil directly in front at the level of the bridge of the nose and at a distance of two feet. Tell him to keep his eyes fixed on it, and gradually approach it to the nose until it is about two inches distant. Watch his eyes closely as it approaches. If the defect is not present, the eyes will converge steadily on it: If it is present, one or the other eye will wobble as it gets near, according to the degree of the defect.

That condition can be cured, or at least improved, by a set of exercises for the eyes, with a corresponding approach to what is called a "quick eye".

B. SHERWOOD-DUNN,
Nice, France.

CAUSES AND TREATMENT OF CHRONIC DIARRHEA*

It is sometimes of practical value to discuss the nature and treatment of a symptom in order to develop a routine method of examination and to choose the proper form of treatment for the underlying pathology, as well as for the presenting symptom. We, therefore, emphasize the three following principles which are based on clinical observation and which we follow routinely in all cases presenting chronic diarrhea as the dominant complaint.

1.—Every patient with chronic diarrhea should be examined with the procto-sigmoidoscope in order to determine the existence of inflammation, ulceration or new-growth in the lower bowel.

2.—A complete physical examination should be made in every instance in order to find the cause, if it exists outside of the intestine itself.

3.—One or more microscopical examinations of the stool should be made in order to find a causative organism such as the Entameba histolytica or other parasite.

The application of the first principle is illustrated in cases of socalled nonspecific ulcerative colitis. This condition is easily recognized by proctoscopic examination. The condition is characterized by an ulcerative condition of the mucosa of the lower bowel with resulting intractable diarrhea, abdominal pain, anemia, some fever, and marked loss of weight and strength. The mucosa as seen on proctoscopic examination is red and very fragile. An exudate may be seen in many places while the characteristic shallow, whitish ulcers of various shapes and sizes are usually present. The later stages of this condition produce shallow pitted scars. J. A. Bargen and A. H. Logan have isolated a gram-positive diplococcus from 80 percent of these ulcers and they believe that this organism is responsible for this condition. A vaccine filtrate prepared from these diplococci and injected subcutaneously has produced excellent results in many instances. Time alone will tell whether we are dealing with a prolonged remission or an actual cure. Rest in bed, residue-poor diet and symptomatic treatment are given in addition to this vaccine filtrate and the results would seem to justify the further use of these measures.

Malignancy of the lower bowel, when inaccessible to the palpating finger or not demonstrable by roentgen examination, is another condition which can be easily recognized by the sigmoidoscope. It is of importance in this connection to emphasize the fact that carcinoma of the colon or rectum may manifest itself clinically by diarrhea instead of by constipation. In a previous clinical study of 60 consecutive cases of proved carcinoma of the colon we found diarrhea to be present in 30 percent. A similar study of 60 consecutive cases of carcinoma of the rectum showed that diarrhea was the dominant symptom in 32 percent. In view of the foregoing we feel justified in assuming that the early use of a proctosigmoidoscope would prevent the too common error of mistaking a bleeding carcinoma for bleeding hemorrhoids and vice versa.

The second principle, namely, that every patient with chronic diarrhea should have a complete physical examination is of value when we are dealing with patients in whom the presenting symptom is looseness of the bowels but in whom the cause lies elsewhere in the body than in the intestinal tract.

*Author's Abstract of a paper by Dr. William, A. Brams, read before the Chicago Medical Society, February 2, 1927.

This group is numerically very large and includes a great number of conditions. Pulmonary tuberculosis both early and late may be associated with chronic diarrhea. Many of these patients, especially those in the early stages, have no demonstrable lesions in the bowel. The cause for this latter form of diarrhea is not definitely known but it may be due to some toxin from the tubercle bacillus or may result from the absence of HCl in the stomach, which is quite common even in early cases of pulmonary tuberculosis.

Another condition which may cause chronic diarrhea is achlorhydria, either primary or secondary. This form, which is also gastrogenous because it is supposed to be due to an absence of free HCl in the stomach, is present in about one-third of all cases of achlorhydria. The fact that no diarrhea is present in the remaining two-thirds may be explained by assuming that the pancreatic and intestinal digestion is sufficient to compensate for the deficiency resulting from the absence of free HCl in the stomach contents. Foods containing connective tissues should be finely ground or avoided altogether. The cause should be removed and the treatment carried out as in other forms of chronic diarrhea, with the addition of copious amounts of dilute HCl before, during and after meals.

Hyperthyroidism is another condition which may give rise to recurring diarrhea. A study was made of 125 consecutive cases of hyperthyroidism and it was found that 17 percent suffered from recurring diarrhea. The value of this illustration lies in the fact that the most important part of the treatment lies not so much in the actual treatment of diarrhea as it does in the management of the hyperthyroidism and the employment of surgery if necessary.

Pellagra is another condition in which diarrhea is frequent. We have had 32 cases during the past year at the Cook County Hospital. Diarrhea was present in 65 percent and many of the patients came with this symptom as the chief complaint. It is important that this possibility as a cause for diarrhea be kept in mind because the treatment consists of giving fresh fruits and fresh vegetables in contrast to the usual residue-poor diet administered in such cases.

The third principle we wish to emphasize is the importance of making one or more microscopical examinations of the stool in every case of chronic diarrhea. By doing this as a routine measure we have been enabled to recognize a considerable number of cases of amebic dysentery which were not diagnosed previously. We have had ten cases of amebic dysentery in our private practice and 40 were admitted to the wards of the Cook County Hospital during the last 12 months. Our experience leads us to believe that this disease is much more prevalent in this vicinity than is ordinarily supposed. It is of interest to note that only 14 of the 40 cases were diagnosed correctly before entering the Cook County Hospital. The diagnosis varied from bleeding hemorrhoids to tuberculous peritonitis or mucous colitis. It is also of interest to note that only 7 of the 40 patients had been outside of Chicago and that 6 of these 7 came from labor camps in Illinois. The gravity of amebic dysentery is apparent when we state that 5 of the 40 patients died, which is a mortality greater than that in typhoid fever.

The treatment which we have attempted to follow in amebic dysentery consisted of the use of emetine hydrochloride subcutaneously for one week, followed by the use of Stovarsol (acetarsone) by mouth for the next week. This treatment as well as the necessary dietetic care is maintained for at least two months after the stools have become normal and free from ameba. We should also be on the look-out for possible complications such as abscess of the liver and stricture of the bowel.

From *Bul. Chicago, M.S.*

NOTES FROM CLINIC AT THE BABIES' AND CHILDREN'S HOSPITAL, CLEVELAND, OHIO, FEB. 22, 1927

Pachymeningitis Hemorrhagica Interna, by Dr. J. I. Hartman.

The clinical picture in this disease is that of intracranial pressure—convulsions, retinal hemorrhages, bulging fontanelle. When a needle is put into the fontanelle to relieve the pressure, the aspirated fluid is icteric and contains red blood cells.

Trauma is a factor in the cause of this condition and recovery is the rule, though residual symptoms frequently persist.

Streptococcus Viridans Endocarditis, by Dr. J. D. Nourse.

This condition is not so common in children as it is in adolescents and young adults—people 18 to 30 years old. It is more frequent since the War, as it seems to have a relation to the strains and stresses of

life, as well as to rheumatism and congenital heart disease.

In these viridans infections, daily, intravenous injections of sodium cacodylate in doses of ½ to 2 grains (in one case we gave as high as 4 grains) seem to do good.

Polioencephalitis—Cortical Type, by Dr. J. E. McClelland.

The disease begins abruptly with fever, vomiting and convulsions. The leucocyte count runs from 10,000 to 25,000. The spinal fluid shows 20 to 80 cells. Hemiparalysis appears in from 24 to 48 hours, and at this time the reflexes are absent. After a week or 10 days, spasticity, Babinsky's sign and increased reflexes develop.

In making a diagnosis one must rule out syphilis, tuberculosis (use the tuberculin test), cerebral hemorrhage, embolism and pachymeningitis (the eye-grounds are clear in polioencephalitis).

The prognosis is not so unfavorable as it seems, at first, but residual symptoms are common.

In treatment, lumbar puncture will relieve the intracranial pressure and give one an opportunity to introduce the specific serum, which seems helpful in some cases. Hydrotherapy, electric stimulation and passive motion should be begun early.

The Intra-Scalp Method of Giving Arsphenamines, by Dr. L. R. Brigman.

I have given between 2000 and 3000 injections of the arsphenamines into the tissues of the scalp with no trouble at all. It seems to have all the good features of other methods and none of the bad ones.

We use neo- or sulpharsphenamine and give 0.01 Gm. per kilo of body-weight. We dissolve 0.03 Gm. to each cubic centimeter of distilled water. Not more than 4 cc. should be injected at one point, but if necessary both sides may be used.

The technic is as easy as giving a hypodermic injection. Use a 20-gage needle and insert it into the thickness of the scalp, 1½ inches above and slightly behind the ear. Massage the place after withdrawing the needle, and touch the puncture with collodion.

Epinephrin in Eczema, by Dr. J. D. Pilcher.

We have used hypodermic injections of epinephrin in cases of herpes zoster, on the same basis we use it in urticaria—to control the itching.

It occurred to us to try it in eczema appearing in infants and children, and we have given a considerable number of injections of 0.2 cc. of the 1:1000 solution, or as much as the case seemed to require. The itching was markedly and promptly relieved in almost all cases.

Reported by G. B. L.

BABY'S DAILY TIME CARD

Seventh, Eighth and Ninth Months

Having reached the advanced age of seven, eight or nine months, the baby may decide, most any night, to forget his ten o'clock feeding and sleep blithely through until morning. Here is an outline of how the baby of this age period may spend his days:

6:00 a.m.....Breast feeding.
Leave alone in crib to sleep or play.
9:15.....Plain cod-liver oil, then orange juice or tomato juice.
9:30.....Bath. Before bath let baby kick and play on bed freely a few minutes without clothes.
10:00.....Cooked cereal, then breast feeding.
10:20.....Out of doors till feeding time. Sun bath and long nap in sun. Drink of water after nap. Play.
2:00 p.m.....Vegetables and egg yolk, then breast feeding.
2:20.....Out of doors as long as season permits, in sun except on very hot days. Short nap. Drink of water after nap. Play.
5:15.....Undress for night. Before putting on baby's night clothes let him play on bed a few minutes. Play must not be exciting nor rough.
5:45.....Plain cod-liver oil, then orange juice or tomato juice.
6:00.....Cooked cereal, then breast feeding.
6:20.....Bed, light out, windows open.
10:00.....Breast feeding (this feeding may be omitted during this period).

Training the Seven to Nine Months Old Baby

When the baby is 7 or 8 months old the physician should decide about weaning him. Once a day (say 10 a.m.) give a bottle feeding instead of a breast feeding.

For two or three weeks give one bottle feeding a day and four breast feedings. Then for a week or so give two bottle feedings a day (say at 10 a.m. and at 6 p.m.) and three breast feedings. Give more and more bottle feedings in place of breast

feedings until the baby is entirely off the breast.

During this period the 10 p.m. feeding may be given up for many babies.

Teach the baby to hold the bottle himself. A cup may be used instead of a bottle.

If the baby has not learned to take solid food keep on teaching him, giving first the solid food and rewarding him afterwards by giving him milk, which he likes. Do not show that you are worried because he refuses to eat. If you do he will soon learn that he can get a great deal of much-desired attention by refusing to eat.

Begin to train the baby to pass water regularly and keep on training for regular bowel movement.

At playtime, put the baby on a blanket on the floor or in a clothes basket or a play pen and let him learn to amuse himself with simple toys, such as spools, spoons, blocks, and boxes.

Do not give in to the baby if he holds his breath or cries or shows temper in other ways. If he does this he is already being spoiled. Holding his breath will not hurt him.

The baby's skin should become well tanned by sun baths.

Diet

Give the baby a bottle of boiled whole milk (6 to 7 ounces), or a formula, each time you leave out a breast feeding. Give the baby fewer and fewer breast feedings, as he learns to take bottle feeding instead.

Green vegetables should be given every day. Give spinach three times a week if it can be had. It is the best vegetable for the baby. Carrots, new green peas, and asparagus are also good. Cook vegetables about 30 minutes in a very little salted water in a tightly covered double boiler (cook old carrots 45 minutes). Put the cooked vegetables through a sieve or strainer. Begin by giving 1 teaspoonful a day and later give 2 or 3 tablespoonfuls or more.

Give the yolk of a coddled, soft-boiled, or hard-boiled egg every day.

Twice a day give 4 tablespoonfuls of thick, well-cooked cereal, such as whole-wheat breakfast food or oatmeal or farina, with whole boiled milk or a small piece of butter.

Give 2 tablespoonfuls of plain cod-liver oil twice a day.

Give 1 tablespoonful of orange juice or 2 tablespoonfuls of tomato juice twice a day.

Offer the baby boiled water, not sweetened, at least twice a day—oftener in summer.

CHILDREN'S BUREAU,
U. S. Dept. of Labor.

ENORMOUS CONGENITAL UMBILICAL HERNIA
(A Case Report)

In obstetrics we all have our experiences and now and then meet with queer things as well as trying situations. We often find freak babies, all sorts of defects and curiosities, to say nothing of the peculiarities of the mothers and perhaps the psychopathic status of the fathers and friends. And sometimes we have opportunities to observe physical conditions usually seen only by the surgeon or anatomist.

A few weeks ago I had a fine opportunity to observe a normal appendix in a newborn infant and to contribute to a slight extent to the relief of its condition.

Mrs. H. W. F., age 35, was delivered, after a normal labor, of her sixth child, a girl weighing 7½ pounds. The mother was rather small of stature, weighing probably about 110 or 115 pounds, but healthy, active and a hard-working woman. The child upon birth immediately cried lustily and kicked its legs and waved its arms actively. But it certainly had *some* hernia! Apparently the whole intestine had descended through the umbilical opening, broken through one side of the cord and lay outside the abdomen, reaching to the child's knees.

The mass was about two and a half or three inches wide and eight or nine inches long, without any covering whatever, the mesentery, of course, puckering the gut much like the pleating on an old-time woman's skirt. Otherwise it lay flat, was of good color, contained some gas and looked healthy. The little appendix, about three quarters of an inch long and as large as a match, was fully three inches and a half from the umbilical opening, showing that practically the whole intestine was outside the abdomen.

After trying for a short time to replace the bowel and seeing that it would require more delay to reduce it than I cared to give just then, I covered the child and intestine with hot cloths and called a friend as assistant, partly to give him a chance to see this anomaly.

While I was caring for the mother (there being considerable hemorrhage) he succeeded after some effort in reducing the

hernia. We then placed a couple of sutures through the cord close to the skin surface, picking up some abdominal tissue in so doing, ligated short and applied a thick pad of gauze and cotton and a snug bandage.

Recovery was prompt. The child slept, nursed, moved its bowels and urinated just as any healthy baby. Fortunately, it did not cry much. The cord separated at the end of the fourth day or early on the fifth; but I had the pad continued for about three weeks and the bandage until the case passed out of my observation. The umbilical opening closed under this simple treatment and I could not see but that the child did as well as any infant.

Of course, I was anticipating infection as I had handled the mass with the same gloves I had used about the mother, only rinsing them on my hands; but my assistant had thoroughly washed his hands. However, no infection occurred, which goes to show the resistance of the peritoneum to bacterial invasion under ordinary conditions or the apparent immunity to harm of a certain class of humanity, under any condition.

I have wondered about the topographical anatomy of that child's abdomen and where, if in after years should it develop an appendicitis, the proper place would be for the surgeon to cut. Of course, the symptoms might locate the position of the appendix, but where would it be? Or would the peristaltic movements of the bowel return the organs to the position that Nature designed them to occupy?

CLARENCE KING,

Franklinville, N. Y.

THE DIGNITY OF CHILDREN

A little child has a dignity that must be respected if he is to become a self respecting personality. By respecting his dignity I mean keeping a well balanced sense of proportion in dealing with him.

He cannot talk like an adult but neither is he silly or incompetent and there is no reason why he should be talked to as though he had not good sense. Baby talk is an affront to childhood. None but the clearest and purest speech should be used in the presence of a little child.

A little one cannot defend himself against attack and it is most unfair to take advantage of that fact to toss him into the air, poke and shove him about. Tickling him is an inexcusable indignity.

Children's nerves are highly sensitive and ought to be guarded accordingly. You dislike the person who shouts at you, leaps out suddenly at you from shadowed corners, whacks you on the back and behaves generally as though you were a puddle in which it was his pleasure to splash. A child dislikes this sort of thing even more, and it hurts him more. He should be nurtured in gentleness.

Children resent strangers peering into their faces and asking for kisses. The prolonged scrutiny of adults is very disturbing to children and they should be shielded from such experiences. Childish dignity demands distance, reserve, courtesy.

Adult language is not clearly understood by young children and often they interpret it dimly. The blurred conceptions give rise to fear and fear is deadly to little children. The fewer long speeches made to them the better.

Children are people and should be extended the courtesy due that estate. Dignity is the basis of self respect.

ANGELO PATRI—*in McCall's Magazine.*

CARBOHYDRATES AND INSULIN ARE INDICATED

(*A Reply to Drs. Meek and Harding*)

The case reported by Drs. Meek and Harding in your issue of February, 1927 (p. 136) suggests the following points to me:

1.—Whatever else may be the matter with this patient, she is almost certainly suffering from fairly severe *carbohydrate starvation.* I find no mention of the diabetic diagnosis having been confirmed by blood-sugar estimations and a sugar tolerance test, but I think that, in view of the patient's age, the glysosuria is unlikely to be of any but diabetic origin.

2.—The only diagnostic measures at all indicated at the moment are in the direction of determining the severity of this diabetes, and thus paving the way to immediate treatment by insulin.

Of what use would a radiographic examination be at this moment? The patient is obviously very ill, and in what way would an exact knowledge of the position of the aneurysm assist in saving her life or applying treatment?

3.—With regard to *treatment*, the patient should immediately be placed on a rich carbohydrate dietary, or, if nothing else can be retained, on glucose in lemonade,

blood-sugar estimations being made throughout the day, if practicable; when a rise in blood sugar has been observed, insulin should be administered, commencing with 10 units a day, until this is controlled.

My experience in this matter makes me certain that a very striking improvement in the patient's condition will be observed in a few days.

It seems to me deplorable that such a valuable form of treatment as insulin should have been withheld from this patient so long, and the idea of controlling her glycosuria with pansecretion appears to me to be ridiculous.

When her strength is somewhat improved one might consider a fuller investigation of her other complaints, by means of x-rays, etc.; but at the moment I am convinced that the obvious immediate indication is *insulin treatment* of her diabetes, involving the consumption of a diet relatively *very rich in carbohydrates.*

S. VATCHER,
Blenheim, Manor Road, High Barnet,
England,

EFFICIENT DIAGNOSIS*

Before we can satisfactorily treat a disease, we must determine the cause. Up to quite recently our treatment was little more than attempts at exorcising diseases.

Anatomical diagnosis has a narrowing tendency. Bacteriology has been a fetish for years. We must see and consider the *whole problem,* and to do that we need accurate *observers,* painstaking *investigators* and wise *interpreters.* Osler was one of this last class.

It is not sufficient to *name* a disease and base the treatment on one line of study. We must assure ourselves whether or not the condition encountered accounts for *all* of the manifestations of disease. We must not be satisfied with *one* finding but must study the life, history, environment, work and associations and see the *patient* rather than the symptoms. This is especially true in psychic disorders and chronic diseases.

We must study *human beings.* Various types of individual susceptibility and resistance to disease are now being studied by biometric methods. We must *use* this information.

Not all disease conditions show the classical features as set down in the textbooks. We must be on the keen lookout for *larval* and atypical varieties of various diseases, particularly endocrine and metabolic disorders.

The general practitioner usually sees the patient first and so has a wonderful opportunity for observation, study and helpfulness. He must constantly remember that "disease" is the reaction between an individual human being and his environment, and must always use *discrimination.*

G. B. L.

*Abstract of an address by Dr. Alfred Stengel, professor of medicine, University of Pennsylvania, before the Southern Medical Association, November 17, 1927.

MOTION PICTURES IN MEDICAL EDUCATION

The medical profession has recently taken notice of the fact that a modern industry has placed at the practical disposal of teachers an extremely effective implement, namely, the motion picture film.

Since we, of the medical profession, are at present on the threshold of an activity along the lines of medical and surgical film production a few suggestions from the pioneers of the field may, if heeded, save us from the distressing spectacle of unscientific "scientific" films. It is my purpose here to point out the possible aberrations which may occur and to present, with a deep consciousness of the incompleteness of its detail, a plan for unfolding the project of applying motion pictures to medical and surgical teaching.

Perhaps the most unfortunate event that could possibly occur at this phase in the formation of the enterprise would be the hasty and ill considered attempts of *every* medical man to make his own films. Be it well noted that I depreciate only "ill-considered" attempts and not all such individual attempts. The marvelous expansion of radio witnessed within our own times has been due almost entirely to the widespread experimentation of amateurs. So, too, in medical motion pictures much good can come from the amateurs. But there is one important difference to be recognized and that is that moving pictures cost money to produce and mistakes are expensive. Hence our amateurs are liable quickly to kill off an enthusiasm which, if properly nurtured, could form the basis of a substantial and progressive new school of thought in medical teaching.

My first suggestion, therefore, is that any medical man contemplating this work should

thoroughly acquaint himself with the most successful methods now known for making medical movies.

Until we have cameramen with a medical education, I believe it will be found most expedient to have the doctor content himself with directing the picture rather than actually taking it and to reserve his intrusion into photographic matters until some special problem arises which makes consultation between medical director and lay camera-man necessary.

Quite apart from the danger of overzealous and unrestrained amateur medical cinematography is the very real danger of the establishment of a virtual monoply on medical films by one of the groups of medical men who, by virtue of superior capital and organization, will perhaps seek still further to augment the inferiority complex which they now, in less subtle manner, wish upon the small town and city surgeon at the various association meetings. Such an event could only be construed as a catastrophy to a worthy project since at this time the film is just as much a part of literature as is the book.

If we *should* avoid uncontrolled individualism and, on the other hand, *must* avoid selfish or bureaucratic monoply, what happy medium *can* we strike?

The solution I propose is the establishing of a "Medical Film Foundation". This proposed institution should be endowed with sufficient funds to produce medical films, based on accepted and recognized medical books, selected without bias, on the strength of librarians' reports and a popular referendum. The "Medical Film Foundation" should furnish to any recognized medical school, medical society or responsible group of medical men any of its films, upon payment of a rental fee and transportation charges, and to any responsible group of laymen, such medical pictures as are intended for lay use. The medical films made should be directed by the author of the medical book being filmed or by some properly qualified doctor of medicine delegated by such author. The technical features of medical motion picture production should be in charge of a technical staff.

The administration and control of the "Foundation" should be in the hands of business men, (Mr. George Eastman would be a good man to sponsor it), which will remedy a notorious defect in many enterprises run by the medical profession, and the complete elimination of professional control will also eliminate the regrettable but actual professional jealousy which exists in many medical projects and works to their great detriment.

The distribution of these films would increase rather than decrease the sale of the books filmed since, if the film appeals, the profession will want greater detail than can reasonably be crowded into a film. If there be any doubt on this point attention is invited to the enormous sale of novels initiated by the feature pictures now presented throughout the country.

J. F. MONTAGUE,
New York City.

STUDY YOUR CHILDREN

In dealing with children it is necessary to find out their reasons and motives. Many times what seems like flagrant disregard for the parents' requests is, to the child, only an earnest desire to help mother or father, as the case may be.

The little girl of 4, who had been told time and again not to play with water, when found in the kitchen dripping wet, having spilt water all over herself, was punished for her disobedience. Later it was learned that what she had done was to climb up on the sink to get a basin of water and a cloth with which to wash the finger marks off the doorway as she had seen mother do. She slipped, the water spilled, and punishment followed. To her it must have looked as if she were punished for trying to help.

Another little boy had learned that he must never pull up the plants in the garden. He watched his father at work getting out the little weeds in the flower bed, and a few days later, in an attempt to be helpful, he pulled up all the little new growth of carrots and left standing the tall, well-developed ragweed!

Some restrictions are placed on children that it is nearly a physical impossibility for them to carry out. "Sit still" and "Be quiet" are very easy to say, and yet to a healthy youngster, full of life and vigor, such commands are extremely hard to carry out for more than a few minutes at a time. Little children are growing and developing new muscular power all the time, and they must have freedom to run, jump, shout, and play. Nature demands it. Perhaps some special part of the house or yard may be set apart as theirs— a place with few

dangers or hampering restrictions where they may safely "work off their steam" unchecked by continual nagging.

D. A. THOM,

Boston, Mass.

TEN COMMANDMENTS FOR PATIENTS

1.—Thou shalt have no other healers but thy physician.

2.—Thou shalt not put before thy physician any false healer, nor shalt thou listen to their words of bunk.

3.—Thou shalt not take the words of thy physician as the wind whistling through the trees, but thou shalt heed his words.

4.—Remember that every day thou must live up to the laws of hygiene or Satan's germs will get thee before thy time.

5.—Honor thy physician; also pay him.

6.—Thou shalt do no murder. If thy child dieth without the care of a physician, thou has done murder.

7.—Thou shalt not commit adultery with thy physician's professional reputation.

8.—Thou shalt not steal. Not to pay thy physician his just bill is to steal from him.

9.—Thou shalt not lie about thy doctor just because he insists on being paid.

10.—Thou shalt not covet thy physician's Cadillac just because thou hast only a Ford. Perchance thy doctor deserves his Cadillac greatly more than thou dost thy Ford.

—*Med. Pocket Quarterly*

LIVER IN PERNICIOUS ANEMIA
(A Group of Recipes)

The use of liver in the diet of patients with pernicious anemia is attracting much attention. (See abstract on p. 395 of this issue).

As this food is not especially attractive to many people, here are some suggestions for preparing it in several ways which will appeal to the appetite and give variety. These recipes have been used successfully at the Presbyterian Hospital, New York City.

1. Scalloped Liver

1 lb. liver.
½ cup crumbs
2 cups white sauce
1 cup tomato
2 squares butter

Parboil the liver and cut in cubes. Line a buttered baking dish with cracker crumbs. Place alternated layers of liver, white sauce, cracker crumbs and tomatoes, white sauce and cracker crumbs. Dot layers with butter.

2. Liver Loaf with Tomato Sauce

3 slices of liver, parboiled and ground
3 strips of bacon, ground
1 tablespoonful of cream
1 small onion, ground
2 eggs
1 scant cup of cracker crumbs

Mix the ingredients, and bake in a loaf, using most of the cracker crumbs to cover the outside.

3. Hot Liver and Tomato Salad

½ cup of ground and cooked liver seasoned with salt and pepper. Place liver on lettuce leaf and put two slices of raw tomato over liver. Top with parsley.

Variation: Serve horseradish or mustard sauce at one side.

4. Liver Custard

1 egg
¼ cup of ground liver
½ cup of milk
¼ teaspoonful of salt
¼ tablespoonful of butter

Beat egg slightly, add liver, milk and salt. Put in buttered mold and set in pan of hot water to bake in a moderate oven until firm.

SEYMOUR FISKE,

New York, N. Y.

The Leisure Hour

Conducted by GEORGE H. CANDLER, M.D.

Camping and Canoeing in Algonquin Park, Canada

TO one who is in love with the great out-of-doors, particularly to one who enjoys swimming, camping, canoeing and fishing, Algonquin Park is a paradise. The Park is a vast, virgin forest and game preserve, 2,721 square miles in area and contains about 1500 lakes. It is two hundred miles directly North of Toronto and One Hundred and sixty-nine miles west of Ottawa. Wild animals abound—there are deer, bear, beaver and wolves—and the fishing is wonderful.

On our trip this year, planned by Central Y. M. C. A. men's department, Cleveland, Ohio, we covered about one hundred miles in canoes, going through numerous lakes and rivers, among them Joe Lake, Baby Joe Lake, Great Opeongo Lake, Island Lake, Little Otter Slide Lake, Otter Slide Lake, Shiner Lake, Green Lake, Opeongo River, McDougall Lake, Kitty's Lake, Farm Lake, Crotch Lake, Shallow Lake, Depot Lake and Victoria Lake.

We started at Joe Lake. Besides our tent equipment, canoes and personal equipment, we took 650 pounds of provisions, the peculiar fact being that these included 103 pounds of jams and preserves. The jam and preserve cans were hard to carry but they sure were good to empty!

Many a portage was made on this trip, a number of which were over a mile in length. At times they seemed hard, but at the end of the portage, when camp was made and one got his portion of food, all was bright again. We had no trouble after such days in sleeping, no matter how hard the ground was.

Every place that we passed was given a name, because of some pain or pleasure which it caused us; for instance, on the second day of the trip we had a long portage of over a mile and a half. That portage was named "Pipe-Organ Portage" because there were so many stops on it. As places were named so were our fellows, and many times the naming was a "razzing". One man was seen to come in at the end of the second day's portage with a pair of tennis shoes and a paddle in his hand, having started out with a much greater load than that. From then on he was called "Portage Ike".

At night we would all gather around a large camp fire, sing popular airs, tell stories, and "razz" each other. One of the fellows, persisted in entertaining us nightly by reading poems of Robert Service, such as "The Shooting of Dan Magrew", "The Cremation of Sam McGee" and "The Marching of the Dead". By the end of the trip we had Dan Magrew shot several times and San McGee cremated just as often.

In this territory, bear in mind, we were away from everyone but ourselves; in fact, we did not see anyone but each other for a week, so we were pretty far inland.

The hardest day of our trip was the fourth, when we travelled from Otter Slide Lake to Green Lake, making three portages aggregating three and one-half to four miles. At the end of that day we were about done. However, after a swim and food we were all cheery and singing upon the edge of Green Lake, our campfire being the only one on that beautiful shore.

Oh, how we enjoyed the lake trout, speckled trout and bass caught in those clean, Canadian waters! How the fellows did jump with the mess kits when the cook would yell, "Come and get it"; and how good that jam did taste! How we did enjoy swimming in those clean waters—how refreshing it was! Oh, the thrill of a fish on the line and then the trouble, many times, in landing a large lake trout on a copper line which seemed to get twisted around the pivot or otherwise entangled, in the excitement of getting it in! What a "grand and glorious feeling" when one has accomplished the feat, and comes back to camp with his trophies to get ready for the big feed!

Well do I recall how, on the Great Opeongo Lake, my friend and I were very

nearly pulled into the water by a big lake trout I was attempting to land. The day was cloudy and windy. We ventured out in our canoe from our sheltered camp site, the lake being about three to four miles across at that place. When about a mile out

On beautiful Otter Slide Lake.

we got a strike, the line being out about two hundred feet. Before I was able to land that lake trout (about ten pounds in weight) the water became very rough, in choppy, short waves, although we did not notice it at the time. I was in the bow, John in the stern. It was so rough that I was afraid to reach back from my position after the fish was ours to get the paddle to help John. I was afraid to let loose of the sides of the canoe for fear it would tip over. John managed to get us to an island about a hundred and fifty yards away and there we stayed for three-quarters of an hour, waiting for the waves to subside. We ventured out about 5 P.M. thinking we could make camp, as we were hungry. We cut squarely into the waves and right into the wind. We set a course and we never lost it; if we had, it might have been a different story. Several times the waves splashed over the bow of the canoe.

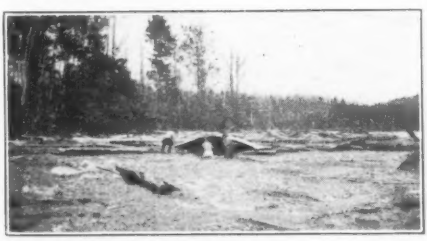
One of the pet expressions of our camping trip was the word "congratulate". Every time a fish was caught or someone did anything remarkable he was to be "congratulated"; and when one was acting as cook's helper, dishing out the jam and other things, if he would put a wee bit more on a plate "congratulations" flowed right and left.

Many of our camps (there were about eight) were close to or right in the midst of blueberry patches or near wild raspberry patches. It was wonderful to sit down on the ground and eat those delicious blueberries to any quantity that one could hold by just moving slightly here and there from where one started; and those red raspberries certainly were a luxury also, for when we took this trip they were just ready to drop off the bushes.

We had the thrill of shooting many rapids. It seemed that almost all the fellows who were inexperienced at canoeing were most anxious to shoot the rapids. I, for one, probably a little more experienced than some of the others, was least anxious to shoot rapids.

The first day seven or eight rapids were shot, all very successfully. It must have been that fate was with us.

The second day was our Waterloo. The first rapids that day was, I judge, about three to four hundred yards long with a few bends in it of which we did not know before we started shooting them. When we had travelled about half way down, our canoe was *travelling*. We had been able to get around two sharp bends but, to our surprise, there appeared before us a right-angle bend into which we were shooting at a considerable speed. We made the turn all right but we could not get to the opposite side of the narrow channel, away from the bank into which the water was shooting at the bend. We planned to go between some rocks at the far side of the channel which were about thirty to forty feet from this very sharp turn. We got the front half of the canoe through the rocks but we could not get the other half through. The left side of the canoe, about the middle, was shoved against this rock, the canoe was swamped, broken in the midle and sunk in about four and one-half of water in a very swift current.



"Our Waterloo'
Lifting our broken canoe out of the rapids.

Curphey and I had stepped out trying to push ourselves through but it was of no avail. There we were, waving and yelling frantically to the others who were coming on behind us, but had not seen us swamped, to stop them in their course. Some of the fellows were quite alarmed, in that on-rush of water in which they were quite powerless, seeing us in the middle of the stream

without a canoe, waving a couple of paddles. By one way or another the other canoes were stopped and no damage was done except to our canoe. We escaped without any loss of equipment or injury to ourselves, patched the canoe together and went on trailing it behind us, empty.

One of the most beautiful camp sites on the trip was the last one made on Victoria Lake, a beautiful body of water in which there are a few islands, surrounded by hills, glorious to look upon with their wonderful growth of pine, birch and other timber. Our camp was in a patch of blueberries about forty feet above the water's edge, giving us a delightful view. The site was well sloped and drained, surrounded by birch and pine and fanned by the breeze, blowing away the mosquitoes which at times had bothered us.

"Empty Bags"
Last day in camp, no provisions left.

On some of the portages we found deer flies, moose flies and little "no see 'em" flies which surely did play havoc with us now and then. But swimming in such clean waters and the tanning by the sun's rays cured all those little troubles.

One of the most remarkable events on this trip happened at this camp on Victoria Lake. About three o'clock one afternoon the cries of some creature in distress were heard, coming from an animal apparently on the run. Three of the boys immediately ran down a trail in the direction from which the cry was last heard. About three hundred yards from camp and about fifty feet from the trail they came upon a large timber wolf attacking a fawn. The wolf looked up from its prey and ran away into the woods without molesting his pursuers. He had apparently chased this young deer across the back of the camp, ham-strung its hind leg and probably broke its back in the attack. We bathed its wounds and tried to give it water but the deer died in about twenty minutes.

The last night in camp on Victoria Lake was a glorious one. Our fire blazed five or six feet high. The new moon had just come up and it seemed as though millions of stars were above us. Everyone was happy. We sang until most of us were hoarse, recalled interesting events of the trip, and poked fun at each other.

The trip was surely a most enjoyable and profitable one. On the morrow we arose about five o'clock and were portaged across by Ford truck, the men hiking, a distance of about nine miles, to Madawaska where our trip ended, Saturday, August 14th.

CLIFTON I. RUST,
1208 Williamson Bldg.,
Cleveland, Ohio.

NO WONDER!

A Philadelphian committed suicide and left the following note:

"I married a widow with a grown daughter. My father fell in love with my step-daughter and married her—thus becoming my son-in-law — and my step-daughter became my mother, because she was my father's wife.

"My wife gave birth to a son, who was, of course, my father's brother-in-law and my uncle, for he was the brother of my step-mother.

"My father's wife became the mother of a son. He was, of course, my brother—and also my grandchild for he was the son of my daughter.

"Accordingly, my wife was my grandmother because she was my mother's mother. I was my wife's husband and grandchild at the same time—and as the husband of a person's grandmother is his grandfather, I AM MY OWN GRANDFATHER!"—*Med. Insurance.*

Newspaper men, with one eye on the clock and the other on the pay window, often make some ludicrous technical mistakes which get by the blue pencil of the copy reader; and these errors are often picked up by Mesdames and Messrs. Hoi Polloi and added to their vocabulary, willy nilly. Witness the following:

Military tuberculosis (*miliary tuberculosis*).

Hypothetic pneumonia (*hypostatic pneumonia*).

Cockeye (*cocci*).

Prostrate gland (*prostate gland*).

Angora pectora (*angina pectoris*).

Thumbnail Therapeutics

MERCURY SALICYLATE IN HAY-FEVER AND INFECTIONS

The control of infections depends primarily upon the activity of the leucocytes; and drugs which induce leucocytosis tend to clear up the infections.

A number of cases of hay-fever, otitis media, iritis, carbuncles and various other infectious conditions have yielded promptly to weekly injections of 1 grain of salicylate of mercury in suspension in oil. The leucocyte count is always increased.—DR. BURR FERGUSON, in the *Lancet* (London).

RADICAL CURE OF PERITONSILLAR ABSCESS

Pus is present in a peritonsillar abscess before it can be evacuated in the ordinary way. Tonsillectomy evacuates this pus and provides massive drainage of the infected area and is safer than futile incision and waiting. It gives immediate relief from suffering and removes the offending tonsil. —DR. HARRY L. BAUM, in *Ann. Otol. Rhinol. & Laryngol.*

URETHRAL STRICTURES

In the management of urethral strictures proceed on the theory that there is but one treatment for them—dilatation. Much patience and a little oil will accomplish a great deal in work of this character.— *Urol. & Cutan. Rev.*

CONTRACEPTION AND TUBERCULOSIS

The prevention of conception in tuberculous women has, I firmly believe, played a part in the falling death rate from this disease during the last 25 years.—DR. S. ADOLPHUS KNOPF, of New York.

THE BACTERIOPHAGE

The bacteriophage is ubiquitous. It is found in the intestinal tract of the human and other animals. The bacteriophage is a parasite upon bacteria. It is an obligatory parasite and cannot multiply save at the expense of its host. To date no artificial medium has been found suitable for the cultivation of the bacteriophage. It may only be cultivated in cultures of susceptible bacteria. In that the bacteriophage attacks germs, it serves in a sense and to a degree to immunize man and animals. Since it is a living thing and is transmissible from animal to animal and from man to man, "the immunity is contagious". — DR. IAGO GALDSTON, *in Medical Rev. of Rev.*

THE SEDATIVE BATH

One of the best sedative measures at our disposal is the prolonged, neutral tub bath, where the patient is immersed as completely as possible in water at a temperature of 96° or 97°F., for from 1/2 to 2 or 3 hours.—DR. ARTHUR H. RING, in *M.J. & Rec.*

METAPHEN AND ORAL HYGIENE

Metaphen has proved to be the best drug to reduce or inhibit the overgrowth of *B. acidophilus* on the teeth and to clean up a foul mouth, thus tending to prevent dental caries. — DRS. BUNTING, NICKERSON AND HARD, in *Dental Cosmos.*

BEFORE OR AFTER MEALS

Drugs which are given for their general systemic effect should always be taken *after* meals. Only when a local gastric effect is desired should they be given on an empty stomach.—DR. HOBART AMORY HARE, in "Practical Therapeutics".

NITROGLYCERIN IN COCAINE POISONING

Poisoning by a combination of cocaine and epinephrin stimulates the vagus and causes a sharp rise in blood pressure. Moss has reported that inhalations of amyl nitrite and hypodermic injections of nitroglycerin reduce the blood pressure and relieve the symptoms, in animals, and believes that the same result would occur in man.—Editorial in *Therap.* Gaz.

OTITIS MEDIA

In treating suppurating middle ears, at home, do not permit the use of injections or irrigations for cleansing. The attendants may *instill* a warm, *sterile* solution of some mild antiseptic (boric acid, acriflavine, etc.) with an ordinary *dropper* and suck it out again with the same instrument.

Heat gives more relief than cold, and is safe when drainage is free. If there is mastoid pain and tenderness, apply an ice bag.—Dr. Francis R. Packard, in *Therap. Gaz.*

DRUG ADDICTION

As a sedative and hypnotic, in the treatment of drug addicts, allonal in proper dosage, is superior to hyoscine, as it does not arrest the secretions and the patients react from it more promptly.—Dr. W. C. Ashworth, in *Virginia Med. Monthly.*

ADMINISTRATION OF AMIODOXYL

The best way to give amiodoxyl (ammonium orthoiodoxybenzoate) is intravenously, by the gravity method (1 Gm. in 100 cc. of physiologic salt solution), administered *slowly.*

If, for any reason, it seems inadvisable to use the parenteral method, the drug may be given by mouth in pills coated with cellulose, keratin or some substance which will prevent its release in the stomach. This largely obviates the nausea which often follows oral administration. The dose is 2 Gm. once or twice a week.

It may also be given by the bowel in the form of a high enema containing 1.5 to 2.0 Gm. of the drug in physiologic salt solution, administered just after retiring for the night.—Dr. A. G. Young, of Ann Arbor, Mich.

SAUERKRAUT

Sauerkraut is valuable for intestinal cleansing, and the lactic acid bacilli present may influence abnormal intestinal flora. It also acts as an anthelmintic.

Cabbage contains vitamines A, B, C, and D, which keep well in acid liquids, so kraut is rich in them. Cooking diminishes the supply. The mineral constituents also make it a valuable addition to the diet.

Patients with pulmonary tuberculosis have been known to show decided improvement after sauerkraut was added to the daily diet.—Dr. A. Hartmann, in *Munch. med. Wchnschr.*

SOUNDS IN CYSTOSCOPIES

In getting ready for a cystoscopy always boil a few sounds. You will need them when least expected.—*Urologic & Cutaneous Review.*

LOCAL ANESTHESIA BEFORE USING HEAVY NEEDLES

When thrusting heavy needles or trocars through the skin for any purpose, the part should first be anesthetized with a 1-percent solution of procaine, used subcutaneously with a fine needle.—Dr. Weller Van Hook, in *Boston M. & S. J.*

DESENSITIZATION

If it becomes necessary to administer an antitoxic serum after another dose of serum has been given, danger of anaphylaxis can usually be avoided by injecting 0.1, 0.2 and 0.5 cc. of the serum, at intervals of 15 to 30 minutes, preceding the prophylactic or therapeutic dose of antitoxin.—*J. A. M. A.*

LUMBAR PUNCTURE HEADACHE

Attacks of headache following lumbar puncture can be eliminated or minimized by injecting slowly into the arachnoid spaces a quantity of air equal in amount to the fluid withdrawn.—Dr. Tzanck and Chevallier, of Brussels, in *J. A. M. A.*

DISPLACEMENT OF THE UTERUS

A simple displacement of the uterus is not worth treating. The condition is not serious and results are disappointing. I select this course not because it is expedient, but because I regard it as right.—Dr. P. Brooke Bland, in *Am. J. Obst. & Gynec.*

READING DURING CONVALESCENCE

When a patient is recovering from a surgical operation or a severe illness, all of his muscles are weak, including his ciliary muscle. It is, therefore, as foolish and dangerous to permit him to put a strain upon this muscle by reading as it would be to let him tax his other muscles by walking about.—Dr. Maurice H. Cottle, of Chicago.

Current Medical Literature

O-IODOXYBENZOIC ACID IN ARTHRITIS

The excellent results obtained by Young and Youmans (*J.A.M.A.* 87: 746, Sept. 4, 1926) in the treatment of infectious arthritis by means of the ammonium salt of o-iodoxybenzoic acid led Dr. Millard Smith, of Boston, to undertake a further study of this drug, and his results are reported in the *Bost. M. & S. J. for* February and March, 1927.

Observing more marked, though not at all serious, reactions at the time of injection, than did Young and Youmans, Smith was led, in later cases, to investigate the administration by the oral and rectal routes. The oral dose consisted of 1.5 Grams of the solid drug, in capsules. Profuse sweating seemed to be the chief uncomfortable manifestation. He found, unfortunately, that certain patients responded to intravenous but not to oral administration. In general he believes that the choice of method as well as the intensity of treatment should be adapted to the individual patient, both oral and intravenous routes together being sometimes better than either alone.

Smith considers the mode of action to be threefold. There is prompt and profound analgesia, appearing shortly after administration, and lasting from 24 to 48 hours. Tender and painful joints frequently become entirely relieved. There is also pronounced relief of muscle spasm after a few hours, permitting a return toward normal joint motion. Reduction of swelling also normally follows, and effusion into the joints decreases. These facts indicate that the drug should be of value in any type of arthritis where there is pain, swelling, and muscle spasm.

The present paper reports upon a series of 33 cases, classified as follows: arthralgia, 2; acute arthritis, 12; chronic arthritis, 16; gonorrheal arthritis, 2; acute rheumatic fever, 1. Twenty-eight, or 85 per cent, showed moderate to marked improvement. The drug gave relief from pain, swelling and spasm in all but one of the acute cases. Two of the five unimproved patients had received less than 3 Grams of iodoxybenzoic acid; in fact, the majority of the patients received less of the drug than was recommended by Young and Youmans. It is highly suggestive that the single case of rheumatic fever was markedly and apparently permanently relieved by a single dose of 0.5 Gram of the drug.

"A very conservative estimate would place it in the first rank of drugs to be used in the therapy of arthritis, although its use by no means eliminates the necessity of using all other useful forms of therapy, including the salicylates. There seems to be a group of patients in whom the drug produces no relief. In this series of 33 cases the great value of muscle massage and training has been forcibly demonstrated." "It can not be too strongly emphasized that this drug should not be used without making simultaneously an exhaustive attempt to find and remove the case of the arthritis"; that is, the responsible foci of infection.

In a subsequent note Smith communicates results obtained with the stable ammonium salt of o-iodoxybenzoic acid (amiodoxyl benzoate) manufactured by the Abbott Laboratories. This preparation was employed intravenously in twelve cases and did not cause the severe reactions reported previously.

The drug, given orally, produces as a rule a much stronger and more rapid salicylate effect than sodium salicylate or acetyl salicylic acid, but the beneficial effect is by no means comparable to that obtained by intravenous medication.

The author noted that certain cases of arthritis were closely associated with the absorption of toxins from the gastrointestinal tract. In these instances amiodoxyl benzoate afforded no relief, and there was some suggestion of an aggravation of symptoms. This phenomenon also seems to be true of the salicylates.

The need for early active motion is emphasized. It is in the relief of muscle spasm, permitting motion, that Smith found amiodoxyl to be of the greatest value.

D. L. T.

POWERS AND USES OF PHYSICAL THERAPY

In *Indépendance Médicale* (Montreal) for Mar. 15, 1927, Dr. J. M. E. Prevost, vice-president of the Canadian Association of Electrophysiotherapy, has set forth, briefly and clearly, some fundamental ideas regarding the use of physical agents in treating disease.

This form of treatment, says Dr. Prevost, acts by augmenting the normal vital activity by stimulating the cells and increasing the elimination of dead elements from the organism. All these agencies exalt the physiologic activity of organs which are so torpid that they are not stirred to action by the simple stimuli of every-day life.

The nervous system exercises autocratic power over the organism, and electricity, in its various manifestations, is the most potent agent for restoring equilibrium to the cerebrospinal system.

By means of electricity, heat and radiant energy (or light) we are able to adapt our treatment to a wide variety of morbid states and bring about curative reactions.

By means of the various physical agencies we can relieve congestion; stimulate

smooth or striped muscle; assist the excretory and secretory organs; increase phagocytosis; adapt our treatment to the physiologic condition and temperament of the patient; and accomplish results in many chronic cases which are impossible by the use of the most potent drugs. Careful analysis and study of the blood and urine will assist us greatly.

The commonest indications for the use of physical therapy are in the maladies characterized by autointoxication and incomplete combustion, resulting in the various manifestations of arthritism—gout, rheumatism, asthma, obesity, diabetes, and neurasthenia. By means of high-frequency currents, sine wave currents, heat-light baths, phototherapy, etc., we almost automatically adjust the perverted metabolism and bring the emunctories to a high state of activity.

The successful treatment of chronic diseases without the use of physical agents is well-nigh impossible.

Far from doing away with the use of drugs, physical therapy increases their activity and makes their effects more prompt and certain.

Disease is an enemy which we must overcome by all means at our command but we cannot always fight against it directly with the weapons in our pharmacologic armamentarium. Physical therapy acts by stimulating the normal physiologic activities of the body and its effects, when properly handled are always salutary and free from violent and vicious tendencies.

The reactions caused by physical agencies are so complicated and subtle that we must possess a full and accurate knowledge of physiology and pathology and apply our therapy with the utmost tact and discretion.

MALARIA INOCULATION IN CHRONIC GONORRHEA

In female patients, gonorrhea often reaches a chronic, symptomless stage in which the danger of contagion is very great. Many of these patients remain positive for months and propagate the disease widely.

Dr. R. Lenzmann reports, in *Deutsche med. Wchnschr.* for September 17, 1926, that he noticed that syphilitic patients who also had gonorrhea and who were treated by malaria inoculation became free from gonococci. He thereupon treated 68 female and 5 male patients with chronic gonorrhea by inoculating them with malaria. The males all cleared up after the treatment. Of the females, 53 were negative at the conclusion of the treatment and eleven more were clear 3 weeks later (94 percent of cures).

No patient was declared cured until subjected to mechanical, chemical and biologic irritation without causing any reappearance of gonococci.

The inoculation was performed by drawing 10 cc. of blood from the malarial but nonsyphilitic donor, with a warm glass syringe, and immediately injecting it into the vein of the patient. The patients were carefully watched for cardiac symptoms with low blood pressure.

The malarial attack was checked by giving 4 tablets of 0.3 Gm. (5 grains) of quinine hydrochloride every 3 hours the first day; 3 tablets the third day, and 2 the fifth day. If this did not stop the chills promptly the quinine was given intravenously.

EPHEDRINE IN EXPERIMENTAL ASTHMA

Dr. E. Kreitmair reports the results of interesting experimental work with ephedrine in *Klin. Wchnschr.* for Dec. 17, 1926.

The pharmacologic action of epinephrin in bronchial asthma is a result of peripheral sympathetic stimulation, whereby the contracted bronchi are dilated. Epinephrin has, therefore, a rapid and beneficial action in such cases, but it has disadvantages: It must be injected; the duration of action is very short, so that injections must be repeated frequently; and it is a strong poison, not only systemically, but also locally (tissue necrosis). Ephedrine is similar in chemical character to epinephrin. Numerous pharmacologic and clinical studies have already been published with the following results:

Ephedrine is qualitatively equivalent in action to epinephrin, but the duration of action is considerably longer. It is less toxic and is active by mouth.

Almost immediately, after introducing 30 milligrams of ephedrine per kilo of bodyweight into a decapitated dog, by sound, the blood pressure rose from 50 mm. of mercury to 120 mm., where it remained for almost one hour. At the same time, the heart amplitude was increased and the pulse decreased.

The action of ephedrine on respiration is the same as that of epinephrin, and is a result of the action on the respiratory center and the smooth bronchial muscle. The central action results in deeper respiratory volume, the frequency remaining the same or increasing, when smaller doses are given; larger doses produce slowing of repsiration; toxic doses paralyze it.

The stimulation of the respiratory center from appropriate doses of ephedrine, is so strong that it may be used directly as an *antagonist in scopolamin-morphine poisoning*, where epinephrin is useless because of its fleeting action.

In bronchial asthma, we are interested only in the peripheral stimulation on the sympathetic and that of the smooth muscles of the bronchi.

The authors produced experimental tetanus of the bronchial muscle by intravenous injection of muscardin or peptone, thus producing an artificial asthmatic condition. In decapitated rats, ephedrine in doses of 5 milligrams per kilogram bodyweight immediately relieved the bronchial contraction and high blood pressure produced by 1 milligram of muscarin, intravenously, or 100 milligrams of peptone intravenously. Epinephrin has the same

action, but the duration is so short that the tetanic contraction reappears after a while, whereas, with ephedrine, one dose is sufficient to eliminate the condition entirely. Ephedrine has, therefore, the following advantages over epinephrin in bronchial asthma:

1.—In appropriate doses the action of ephedrine is equal in intensity to that of epinephrin, but the duration of its action is considerably longer.

2.—Ephedrine is efficient by mouth.

3.—Ephedrine is much less toxic than epinephrin.

These advantages over epinephrin have already been confirmed clincally.

Abstract translation by CARL NIELSEN.

LIVER DIET IN PERNICIOUS ANEMIA

In *Northwest Med.* for December, 1926, Dr. I. C. Brill, of Portland, Oregon, reports the results of a special diet in treating 3 cases of advanced pernicious anemia, and these results are so striking as to command attention.

All cases had been ill for more than three years; all had had several relapses; all had severe glossitis and were emaciated; two showed nausea and vomiting and one complete anorexia; one was deeply jaundiced; all had a high color index; the red cell counts ranged from 1,280,000 to 1,740,000 and the hemoglobin from 26 to 38 percent; all had been actively treated by other methods, two having had blood transfusions.

The diet consisted of 240 Gm. of liver and 140 Gm. of beef steak, daily, with an abundance of fresh fruits and vegetables.

The glossitis cleared up, in all patients, within 48 hours, and within a week they were eating and retaining the full diet. Within 5 weeks they had gained 20, 30 and 40 pounds in weight, respectively. The jaundiced patient cleared up in 2 weeks. There was no change in the achylia gastrica.

The change in the blood picture was remarkable and progressive. At the end of five weeks the red counts were 5,000,000; 5,200,000; and 5,030,000 and the hemoglobin 83, 90 and 95 percent, respectively. The leucocytes and the color index had returned to normal and the patients were up and around, feeling well.

At the end of five months the favorable conditions had been maintained by all three patients.

MALTA FEVER AS A PUBLIC HEALTH PROBLEM

We have long known that undulant fever, or Malta fever, occurred frequently in Europe, but it was first reported in the United States by Craig, in 1903.

Quite recently we are coming to recognize that infections with *Brucella* (or *Bacillus*) *abortus* are indentical in every way with Malta fever and are not very uncommon in this country. [A case was reported by Lane in CLIN. MED. & SURG. for March, 1927, on p. 200.—ED.]

In the *J.A.M.A. for* Feb. 12, 1927, Thomas J. Hull and Luther A. Black, of Springfield, Ill., express their opinion that this disease constitutes a public health problem and review the literature, with a bibliography and reports of experiments and of 4 cases.

Their comments and conclusions are as follows:

The fact that many persons harbor in their blood streams agglutinins for *Brucella abortus* was demonstrated by Larson and Sedgwick in 1913. Evans considered that a reaction in a 1:20 dilution was suggestive, and should receive further study. In our studies, only reactions complete in 1:50 were considered. Absorption tests were not made because of the unavailability of the patients. However, connection with goats was never reported. In fact, goats in Illinois are a minor factor. This leaves cattle and hogs as the possible sources. As intimate association with hogs is much less prevalent than access to infected cow's milk, cattle are probably responsible for the majority of these cases.

Recently, Francis and Evans have drawn attention to agglutination of *Brucella abortus* by serums from tularemia cases. The possibility of infection among laboratory workers who handle *Bacterium tularense* cultures has so far prevented agglutination tests and agglutinin absorption tests with *Bacterium tularense* in these laboratories.

Among sixty-nine specimens of blood from fever patients who consistently gave negative Widal reactions, agglutination reactions with *Brucella abortus* (bovine) antigen were positive in five in dilutions of 1:200 or greater. It would seem that undulant fever may be much more common than is ordinarily suspected.

KETOGENIC DIET IN EPILEPSY

The value of a ketogenic diet in epilepsy, particularly in childhood, is being widely discussed, and Dr. M. G. Peterman deals with the subject in the *Wisconsin M.J.* for September, 1926.

The ketogenic diet consists of 10 to 15 Gm. of carbohydrate with not over 1 Gm. of protein per kg. of body weight (up to 50 Gm.) with the remaining calories (usually not to exceed 2200 in children) supplied in fat. The total caloric allowance is calculated at approximately 30 calories per pound. However, this allowance must be adjusted to keep the patient's weight at or slightly below normal for the age and height. The diet is best instituted directly following one week of starvation (allowing diabetic broth and some filler, with water freely). If starvation is not feasible, the diet is instituted by gradually reducing the carbohydrate from 74 Gm. daily to 50 Gm., 30 Gm. to 15 Gm. in five days. The protein is correspondingly reduced daily from 50 Gm. to 45 Gm. to 35 Gm., to the calculated amount; the fat is increased in proportion to keep the caloric allowance approximately the same. Any

tendency to nausea and emesis can easily be controlled with orange juice. Concomitant with the ketosis, or when the urine shows acetone and diacetic acid, the attacks are usually decreased in number and severity or cease altogether. If necessary, the fats are further increased until the attacks cease. This diet is now maintained rigidly, even through all ordinary illnesses, until there have been no attacks for 3 months. The protein is then increased 10 Grams. After another month of freedom the carbohydrate may be increased five Grams and so on, with a reduction of fat to keep the patient's weight normal.

It is advisable to institute monthly periods of starvation. For 2 days each month the patient is given only diabetic broth and wafers or muffins with no food value. Water is allowed freely. On the third day the diet prescription is again instituted.

SALESMANSHIP FOR PARENTS

When some fellow has something which he thinks we ought to have, he is very ingratiating, logical and persuasive in his arguments as to its merits, but never abrupt nor dictatorial.

Happy Goldsmith, writing in *Children, The Magazine for Parents*, for October, 1926, wonders why parents have not made more and better use of modern ideas of business psychology in the solution of their home problems. If Johnie does not care for spinach, it ought to be possible to stimulate a "demand" for the useful foodstuff on his part by the methods suggested in the accompanying cartoon.

He also suggests that, if a child refuses to eat something which should be a part of his diet, the *product* be examined before taking the child to the doctor to see what is wrong with him. Wholesome food must be presented in as attractive and palatable manner as possible if the child's cooperation is to be obtained.

The child must be studied by the parent and methods adopted which are suited to his particular psychologic traits.

HYOSCINE AND EPHEDRINE

Hyoscine (sometimes called scopolamine, especially by European writers) is indispensable to the psychiatrist, the obstetrician and the surgeon and is used alone or combined with morphine*, but the individual susceptibilities of patients vary so widely that the drug is considered dangerous by some observers. Its action is especially unfavorable in the very old, and in patients with arteriosclerosis and circulatory disturbances.

In *Munch. med. Wchnschr.* for December 17, 1926, are two articles, one by Dr. H. Kreitmair and the other by Dr. Erich Guttmann, recommending that the bad effects of hyoscine can be minimized by combining it with ephedrine in appropriate dosage.

Guttmann uses ampules containing 1 mgm. of hyoscine and 25 mgm. of ephedrine and finds that the sleep following the use of this combination is restful and the breathing quiet and regular (different from the stertorous respiration following hyoscine alone).

The ephedrine does not interfere with the narcotic action of the hyoscine, and the results are so good that he gives these drugs to old people, arteriosclerotics and circulatory cases.

Dr. Kreitmair set out to eliminate the toxic effects of hyoscine along pharmacologic lines. Knowing that death is produced by acute paralysis of respiration, weakening of the heart action and a fall of blood-pressure, he sought a drug which would counteract these symptoms without interfering with the narcotic effect, and found it in ephedrine hydrochloride.

It was found that 0.25 to 0.5 mgm. of ephedrine per kilo of body weight, used intravenously, or ten times that amount intramuscularly, would greatly decrease the toxic action of hyoscine, alone or with morphine, without interfering with its narcotic effect or the production of "twilight sleep". Though larger doses of hyoscine can safely be given in this combination, nothing is gained by doing so as the large doses are likely to cause excitement.

Most of this work has been done on animals, but there is sufficient clinical evidence of its value to warrant its wide use, under controlled conditions. If other workers confirm these observations, it should do much to popularize the use of hyoscine or hyoscine and morphine in a considerable range of surgical, obstetric and psychopathic conditions.

*See CLINICAL MEDICINE for September, 1926, p. 620, for the pharmacology and therapeutics of this drug. —ED.

PREVENTION OF SERUM DISEASE

In *Ugeskrift for Laeger*, December 23, 1926, Dr. H. Heckscher describes a method for controlling serum disease in patients

who receive large doses of antitoxin for diphtheria.

From January 1, 1924, to April 1, 1926, 1,113 cases of diphtheria were treated with serum. Of these about 15 percent received doses of from 200,000 to 300,000 units. Among all the patients treated with antitoxin, 55.6 percent showed signs of serum sickness. Large doses of serum caused symptoms more often than small doses. The incidence and severity of the serum sickness increased with the age of the patient, and was more frequent after intramuscular than after intravenous injections.

Prophylactic experiments were made with a polyvalent staphylococcus vaccine containing 1,000 million bacteria to the cubic centimeter. Patients over 15 years old received from 0.5 to 5.0 cc. of this vaccine, intramuscularly, on five successive days—4th to 9th day after injection of the serum. Younger patients were given less of the vaccine.

Among 193 patients given the vaccine—as compared with 192 controls—the incidence of serum disease was reduced by about a third, this reduction affecting the severe cases almost exclusively.

LIGHT IN THE PREVENTION OF RICKETS

Rickets is one of the diseases most amenable to ultraviolet therapy, and there is a definite and more or less interchangeable relation between light and diet in these cases.

In *Physical Therapeutics* for September, 1926, Dr. F. H. Humphris emphasizes the fact that the mother should receive regular ultraviolet treatments during the periods of pregnancy and lactation, in order to conserve her supply of calcium and phosphorus.

Children who have not had these advantages before birth (or even if they have had them) should be rayed two or three times a week during a period of a month or six weeks in their first year of life Raying of the food is also of value.

It is not merely rickets as a disease entity which is decreased or relieved by these measures, but this condition is an underlying factor in infant mortality from many other causes, and its control will materially reduce the death rate for babies.

SYNTHALIN

In *Wien. med. Wchnschr.* for December 18, 1926, is found a description of a new synthetic drug which seems to have many of the properties of insulin. This drug, known as synthalin, is an alkylated guanidin derivative and is a true compound (not a mixture) occurring in crystalline form.

In laboratory animals, synthalin produces symptoms much like those caused by insulin, and in diabetic patients its use has been followed by the cessation of a glycosuria amounting to 30 to 45 Gr. of sugar excreted daily in the urine. The acetone bodies disappear from the urine along with the disappearance of the sugar.

The chief differences between insulin and synthalin is that the latter acts much more slowly (effects do not appear for 24 hours after its administration, but they last for 24 to 36 hours after the last dose) and that it produces its effects when given by mouth, in doses of 10 to 25 mgm., taken at the beginning of a meal, once daily, as indicated.

Clinical investigations have shown that synthalin can replace insulin in the treatment of mild or moderately severe cases of diabetes and that its use will permit reduction of the doses of insulin in severe cases. This new drug must, however, like insulin, be used only upon the recommendation of a qualified physician and under his constant control.

SODIUM THIOSULPHATE AND CALCIUM LACTATE IN CARBON MONOXIDE POISONING

It is well known that those who suffer from chronic poisoning with carbon monoxide or who recover from acute poisoning are prone to suffer from serious sequelae such as pneumonia, cardiac palpitation, gastrointestinal disturbances, transient glycosuria, cutaneous eruptions, localized edema and gangrene; together with nervous phenomena which include central and peripheral paralyses, persistent headache, mild hallucinations or even confusional insanity.

In an endeavor to prevent or relieve these late symptoms, Dr. W. H. Zeigler Professor of pharmacology, Medical College of South Carolina, has carried out some interesting experiments which are reported in *J. Lab. & Clin. M.* for November, 1926.

As a result of these experiments he believes that intravenous injections of sodium thiosulphate will materially benefit these patients, and suggests the following method of treatment.

In acute poisoning, give artificial respiration and, as soon as possible, inject, intravenously, 5 cc. of a 2-percent solution of *sodium thiosulphate* for each 25 pounds of body weight (30 cc. for a man weighing 150 pounds).

The next step is the subcutaneous injection of 5 cc. of a 4-percent solution of *calcium lactate* for each 25 pounds of body weight. After the patient regains consciousness, 1 Gm. of calcium lactate should be given, daily, for several days.

New Books

DALLY: HIGH BLOOD PRESSURE

HIGH BLOOD PRESSURE. ITS VARIATIONS AND CONTROL. A Manual for Practitioners. *By J. F. Halls Dally, M.A., M.D., B.Chir., Cantab., M.R.C.P. Lond., Physician to the Mt. Vernon Hospital for Tuberculosis and Diseases of the Heart and Lungs. Second Edition. New York: Willian Wood and Company.* 1926. *Price* $4.00.

High blood pressure is occupying the attention not only of medical men but of the laity as well, so it behooves physicians to be well posted on the subject. The literature is extensive and widely scattered so that a summary of the proved conclusions should be helpful.

Dr. Dally begins by devoting 75 pages to the technic of estimating the systolic and diastolic pressure (including a discussion of the various types of sphygmomanometers) and to a consideration of the factors which may influence the readings and the conclusions we may draw from them.

He then considers the causes of hypertension (arteriosclerosis, renal sclerosis, acute nephritis, etc.) in some detail.

Several chapters deal with the treatment of high blood pressure by diet, psychotherapy, drugs, mineral waters, physical therapy, etc.

The book seems to offer no new or startling ideas on the subject, but serves a useful purpose in presenting a reasonably complete and up-to-date summary of our present knowledge, convenient for study and reference.

SMITH: APPLIED REFRACTION

APPLIED REFRACTION. *By Homer Erastus Smith, M.D., Assistant Surgeon Manhattan Eye, Ear and Throat Hospital, New York City. New York: William Wood and Company.* 1927. *Price* $2.75.

This is not a book for the beginner in refraction work, as it presupposes a knowledge of the physical principles of optics and of the anatomy and physiology of the eye. It does not, in fact, deal with the *science*, but solely with the *art* of refraction.

It is a neat little volume of 125 pages and an index, well printed on good paper and containing, among others, such chapters as, The Refraction Room, The Trial Frame, Taking the Visual Acuity, The Psychology of Refraction Work, Cycloplegia, The Bifocal Lens, The Mechanics of Visual Appliances, The Cosmetic Value of Glasses, etc.

The style is terse and readable and the book is not padded with useless illustrations or theoretical discussions.

This should prove an excellent book for the practitioner who has a sound knowledge of the physics and physiology of the eye and who desires to do refractions as a service to his patients and as an ethical and proper means for increasing his income. If its teachings are followed the physician need not fear competition from poorly trained optometrists.

CARNCROSS: GROWING UP

THE ESCAPE FROM THE PRIMITIVE. *By Horace Carncross, M.D., Fellow of The College of Physicians of Philadelphia. New York and London: Charles Scribner's Sons.* 1926. *Price* $2.50.

The great present difficulty with society seems to be that it is immature—childlike or adolescent. The world needs to grow up. That is the text of this charming book, in which Dr. Carncross has set out to show that races as well as individuals pass through the stages of infancy, childhood, adolescence, maturity and age—or animality, savagery, barbarism, civilization and decadence. The "primitive", from which he would have us escape, is the childish and irresponsible outlook on life—the refusal to face reality.

In considering the mechanism behind these realities he says, "Spirit, which is a phase of force, acting upon matter, which is another phase of force, begets spirit-manner, which is life.... Man must spiritually grow up, and that consciously. . . . We are transmitters of energy."

In the chapter, Nature is not Conquered unless Obeyed, he says, "Death, which permits renewal, is the only possible means by which progress can take place, for otherwise there would finally be no room for the birth of new material."

Such chapter headings as Chance or Purpose; Instinct and Intelligence; Free Will and Fate; Responsibility; The Sin of Youth; Reality; and others challenge attention, and such statements as, "That we all have powers far beyond what we use, there is no question"; "Nothing that exists is outside the realm of nature"; and "Much of the business of the world is undertaken to avoid thinking", set us to pondering.

Dr. Carncross is an active psychoanalyst, of the broader modern type, and when he applies the results of his studies to races and nations, as well as to individuals, the results are highly interesting for psychologists, sciologists and all who are seriously interested in the world's progress.

The handling of the material is a bit wordy, but the words are so well chosen and pleasingly used that one is ready to overlook that fact, except where, in spots, the prolixity tends to obscure the meaning.

On the whole, the book is fascinating, stimulating and provocative and brings new, sound and rational ideas to bear upon the business of living in a way which should

be extremely helpful to all thinking people. We heartily recommend it to all our readers.

WAITE: SAVING EYESIGHT

SAVING EYESIGHT AFTER MID-LIFE. *By John Herbert Waite, M.D., S.M., Instructor in Ophthalmology, Harvard Medical School, Cambridge: Harvard University Press.* 1927. *Price* $1.00.

The author states that one-third of all blindness, arising after 40 years of age, is due to glaucoma, and that, in the early stages, this disease is generally curable by surgery.

There is a brief discussion of the importance and mechanism of vision, at the beginning of the book, and a few pages on conditions, other than glaucoma, which cause blindness in later life, but most of the space is devoted to describing the symptoms and results of glaucoma and a plea for regular examinations by an ophthalmologist in order to detect the disease in its incipiency, while it is still curable.

This little volume of 48 pages is intended, primarily, for laymen, but many general practitioners will find some interesting points which may prove helpful in advising their patients.

PERRY: PRELIMINARY DIETETICS

A MANUAL IN PRELIMINARY DIETETICS. *By Maude A. Perry, B.Sc., Director of Dietetics, The Montreal General Hospital, Montreal, Canada, St. Louis: The C. V. Mosby Company.* 1926. *Price* $1.25.

This book on dietetics is intended for use in the class room in the instruction of nurses and dieticians.

Each chapter is made up of information on food and practical recipes. The book contains material which could be used for demonstration by the instructor, or by the student for individual study.

F. J. H.

KRISHNAMURTI: HAPPINESS

THE KINGDOM OF HAPPINESS. *By Jeddu Krishnamurti. New York: Boni and Liveright.* 1927.

The religionists of the recent past gave the idea that it was sinful to be happy and that the only way to be good was to suffer and pull a long face.

Science has now demonstrated the health-preserving and health-restoring power of happiness beyond further doubting and the churches have largely abandoned the old, lugubrious, puritanical teachings. The rising generation is indulging in some rather grotesque and pitiful efforts to seize pleasure, which they foolishly consider to be synonymous with happiness.

Now comes a young mystic and spiritual teacher from the East, proclaiming that happiness is the one thing for which human beings should strive. Not the empty and ephemeral pleasure which comes from the thoughtless grasping after physical things, but the true happiness, high and keen, which comes from an active and controlled mind and a clean and vivid life.

He preaches the doctrine of the necessity for beauty and culture and teaches that man must look inside himself rather than outside if he is to find real happiness.

This little book is the outpouring of a happy heart, informed by eyes that have seen and a mind that has grasped the ultimate realities. It is worth reading as being the latest pronouncement of an individual who has been much in the public eye of late and it has also deep and intrinsic merit as a statement of the philosophy of a clean, sane joyousness, as opposed to the sometimes murky hilarity which passes for joy these days.

WHITE: SURGICAL HANDICRAFT

A TEXTBOOK OF SURGICAL HANDICRAFT. *For the Use of Medical Students. Second Edition. By J. Renfrew White, Ch.M. (N.Z.), F.R.C.S. (Eng.), F.A.C.S., First Assistant to the Professor of Surgery, Otago University. New York: The Macmillan Company.* 1926. *Price* $6.00.

In his preface, Mr. White states that this book has been compiled for use by junior medical students. Standards in New Zealand must differ from those in the United States. In our opinion this book is too detailed for satisfactory use by undergraduates, but makes an excellent textbook for junior surgeons.

A less important criticism, perhaps, is that in many of the illustrations important details are completely lost, especially in those which deal with technic in the operating room, the white gowns, head and face coverings of surgeons and nurses and the sheets over the patients blurring the darker, exposed parts, which occasionally look more like an ink spot than a region to be treated.

The student is rather overburdened with nonessential details. Practically every known antiseptic is mentioned and described and, in the sections on bandaging and ligatures, some details could have been omitted with advantage.

But the criticism is, of course, out of place when it comes to its use by junior surgeons, or, as we call it in this country, internes and assistants to surgeons. These should be familiar with all the material and uses in vogue in all operating rooms and they can read the book with considerble profit.

The chapter on Asepsis and Antisepsis is especially interesting, because it reviews the history of these methods and shows the danger incident to their omission. The methods of sterilization by heat are well described.

Surgical materials constitute another chapter which is brought up to date. Bandaging and the use of plasters are carried through five chapters. The preparation and after care of surgical patients

represents the most valuable part of the book. Finally a number of chapters deal with certain materials and their commercial preparation, with position of patients for various operations, etc.

The value of the book would be enhanced from the standpoint of the student, were it to contain a list of instruments and materials needed for the most common operations, and certainly for emergency operations outside of the hospital.

Taken all in all, however, we find gathered together in this volume of nearly 600 pages of text, valuable information which even experienced operators will desire on their bookshelf for frequent reference.

G. M. B.

GILBERT: MEDICAL ACCOUNTS

A System for Keeping A Physician's Accounts. *By J. V. Gilbert, M.D., Maricola, California. Published by the Author. Price* $15.00.

This is a pocket record of the work done by the physician, so arranged that accounts can be kept posted up to the minute with a minimum of labor.

It consists of sheets for recording the charges for services rendered each patient, with spaces for each day of the month; cash sheets for old and current accounts, for office work and for consultations, etc.; expense account; obstetric memoranda; engagements and appointments; record of money borrowed and loaned; and what the author calls the "Little Journal", to which accounts are posted at the end of each month. All of these sheets go in a loose-leaf binder of pocket size.

The sheets are appropriately printed and the paper is so thin that a fairly large number of accounts may be carried in the pocket all the time.

For the physician who has no office help but wants to keep his accounts always posted and ready for settlement this system should prove helpful. It does not, of course, provide for any clinical records.

RUCKER: LEADERSHIP

Leadership. A Manual on Conduct and Administration. *By William Colby Rucker, M.S., M.D., Dr.P.H., Surgeon, United States Public Health Service. New York: The Macmillan Company.* 1926. *Price* $2.25.

An interesting and, on the whole, a more or less successful attempt to put the principles which underlie leadership upon a standardized basis so that anyone may learn and practice them. The book was written primarily for the instruction of young officers in the Public Health Service, but it ought to be helpful to any young man.

Leadership of others is based upon character and leadership of self. Under the former heading the author discusses common sense, intelligence, acumen, simplicity, sense of humor, justice, earnestness, energy, enthusiasm, perseverance, faith, worry, honor, honesty, truthfulness, cleanliness and loyalty; and under the latter, gentleness, tact, courtesy, impartiality, dignity, courage, imagination, promptness, industry and several others.

It will not take anyone long to read this little volume, and the time will be well spent. Those who study and *practice* its teachings will be more capable and satisfactory citizens than they were before.

GRAHAM: DIABETES

The Pathology and Treatment of Diabetes Mellitus. *By George Graham, M.A., M.D., F.R.C.P., Assistant Physician, St. Bartholomew's Hospital. Second Edition. London & New York: Humphrey Milford, Oxford University Press.* 1926. *Price* $2.75.

The first part of this book deals, in detail, with the physiology of sugar metabolism; while the second part contains an account of the different types of diabetes mellitus, with diagnositic suggestions and an outline of treatment.

This second edition contains new chapters on the special properties of insulin and the details of its use in treatment, as well as many changes in the older parts of the text, bringing the work up to date.

The style, like that of many of the English books, is smooth and pleasing and very easy to read. Directions are clearly given and adequate bibliographies are appended to the chapters.

A sound and scientific book on a subject which should be of interest to all physicians.

FLEWELLING: CREATIVE PERSONALITY

Creative Personality. A Study of Philosophical Reconciliation. *By Ralph Tyler Flewelling, Professor of Philosophy, University of Southern California. New York: The Macmillan Company.* 1926. *Price* $2.50.

What is personality and what has it to do with the structure and functions of man; of the earth; of the universe? Is God a person? What are, or should be, the relations between science and religion? These are some of the questions treated in this delightful book.

The author avers, "Surely, he takes the high road of life and comes nearest its deepest understandings, who discovers it from the standpoint of creative personality." And he quotes the old Chinese mystic, Lao-Tze, to the effect that, "Reality is that which can suffer change, and yet remain the same, through change."

The book is divided into four sections: Problems of Reality; Problems of Thought; Problems of Value; and Problems of Life. Under each of these headings are a number of thought-provoking chapters, following each other in orderly and reasoned sequence.

Here are a few pertinent observations: "Organization, intelligibility, are written all over the universe and may easily be viewed as the most important part of it."

"No painter puts on canvas a picture which has not first had its place in mental conception. There is no product of the human hands but is likewise the product of the human intelligence."

"The more rational, and even scientific, assumption then is that, in a coordinated and intelligible world, causation proceeds from a purposive and intelligent source."

"If order, here and now, implies order in the beginning, the theistic assumption of a purposive Cosmic Intelligence as the active ground of the world is not only satisfying to the human heart, but it is reasonable as well."

"The brain is the muscular organ which grounds mental activity. The personality directs this mental activity in the creation of ideas, as the runner directs the course of his running."

"If science can increase knowledge, that knowledge is but a phase or portion of eternal truth and cannot be hostile to a true religion. If religion is true, it has nothing to fear from any discovery in any realm."

This is *not* a book to while away a lazy hour; nor is it for those who dread mental exertion or who have "jelled" in some particular form of belief.

To those who love a sound, logical and valid argument, conducted along philosophic lines and reaching important conclusions it will prove a joy and a stimulant.

BESANT: WORLD TEACHERS

How A World Teacher Comes—as Seen by Ancient and Modern Psychology. Four Lectures Delivered at the Queen's Hall, London, during June and July, 1926. *By Annie Besant, D.L. London: The Theosophical Publishing House, Ltd.* 1926. *Price* $1.00.

There has been a good deal of talk of late regarding the coming of a World Teacher. Here is a cool, reasonable and logical explanation of the mechanism by which such a coming would take place, backed up by quotations from the works of recognized psychologists and investigators and by the accepted teachings of the world's great religions.

A book which the student of science can read without assaulting his reason and common sense (for it is worked out along sound scientific lines), and with great profit, because it shows some of the fascinating places in the world of thought at which one can arrive by following avenues of speculation which comparatively few now have the vision and the courage to investigate.

FAIRBAIRN: OBSTETRICS

Obstetrics.— *By John S. Fairbairn, M.A., B.M., B.Ch., (Oxon.); F.R.C.P. (Lond.); F.R.C.S. (Eng.), Obstetric Physician, St. Thomas's Hospital. London & New York: Humphrey Milford, Oxford University Press.* 1926. *Price* $1.75.

One of the Oxford Medical Handbooks, and fit to be in that class. A ready- reference manual for students and busy practitioners which does not, of course, take the place of a textbook, but serves its intended purpose very well.

The type is clear and set without leading, so that, with the rather narrow margins, a surprising amount of material is contained in small compass.

There is nothing new or surprising in this little book, but those who need a compend of obstetrics will do well to purchase this one.

WEISSBEIN: DEUTSCHER BÄDERKALENDER

Deutscher Baderkalender. *Herausgegeben vom Allgemeinen Deutschen Bäderverband E.V. Abteilung A. Redigiert von Prof. Dr. Weissbein. Mit einer Einführung von Ministerialdirektor Prof. Dr. Dietrich. Bader- und Verkehrs-Verlag B.m.b.H., Berlin SWII. (Can be obtained through German Health Resort, 630 Fifth Avenue, New York City.)* 1926.

An alphabetically arranged reference book, for physicians, on German watering places. (In German.)

MEDICAL BIOGRAPHIES

Physicians of the Mayo Clinic and Mayo Foundation. *With Portraits. Philadelphia and London: W. B. Saunders Company.* 1927. *Price* $7.00.

Brief biographies, with photographs, of all the physicians who have been connected for a year or more with Mayo Clinic, from its beginning up to January 1, 1926. Bibliographies of the writings of each man are given.

A reference book for medical societies and medical libraries.

INDEX OF COLLECTED PAPERS OF THE MAYO CLINIC

Index of the Collected Papers of the Mayo Clinic and the Mayo Foundation. 1884 *to* 1925. *Philadelphia & London: W. B. Saunders Company.* 1926. *Price* $5.00.

Medical News

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A BUSY AMBULANCE IN CHINA

This little Ford ambulance maintained by the Shanghai Municipal Council, is kept busy in these days of turmoil in China. Our brethren over yonder are not so backward as some of us are inclined to believe.

HOSPITAL CONGRESS

The Hospital Clinical Congress of North America will meet in the Milwaukee Auditorium, Milwaukee, Wis., June 20 to 24, 1927.

Here all the newest things in hospital equipment and procedure will be exhibited and demonstrated, for the benefit of those who are interested in the organization and management of hospitals.

POSTGRADUATE WORK

Last year the Chicago Medical Society arranged two postgraduate courses of two weeks each which were open to a limited number of physicians from Illinois. The list was filled *one week* after it opened and the courses were a big success.

This year they have greatly enlarged their program and have opened the courses to all physicians, who will be listed in order of registration until the quota is filled. The registration fee is $10 for one two-week course, and that is all anyone will be allowed to take.

The largest and finest hospitals and the best-known clinicians in Chicago are cooperating in this program. The first course will begin June 18, 1927 and the second June 27.

Here is a chance for medical men to obtain the highest-grade postgraduate instruction available in this country at a rediculously low fee.

Better register early!

NOTED PAINTER DIES

About fifty percent or more of the physicians in this country have hanging in their offices a picture called "The Doctor". Those who do not have the picture are familiar with it.

It may be of interest to note that the man who painted this picture, Sir Luke Fildes, R.A., died recently at his home in London, England, at the age of 83 years.

Courtesy of *Surgery Gynecology & Obstetrics*

DEATH OF DR. E. WYLLYS ANDREWS

Surgery has recently sustained a serious loss in the death of Dr. E. Wyllys Andrews,

of Chicago, Professor of Surgery, Northwestern University Medical School.

Dr. Andrews was one of the founders of the American College of Surgeons, an active worker in a large number of surgical societies, one of the founders of *Surgery, Gynecology and Obstetrics* and one of its editors from the beginning, and a large and valuable contributor to medical literature. His work on hernia was especially notable.

He was also a competent Latin scholar, a keen and active sportsman and an authority on Shakespeare.

Men of such wide interests and accomplishmens are rare and their loss is keenly felt.

MEDICO-LITERARY OPENING

We have knowledge of an excellent opportunity for a young physician who is interested in literary work and wishes to devote himself to it seriously. He should be able to read French and German with reasonable fluency, but a speaking knowledge of these languages is not necessary. Other things being equal, a man under 35 who has had several years of practical experience will have the best chances.

If interested, address the Editor CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.

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DR. ALFRED ADLER

Among the world's greatest psychiatrists is Dr. Alfred Adler, of Vienna, Austria, who is now visiting the United States.

Dr. Adler was one of Sigmund Freud's most notable followers, but has diverged from the strict freudian teachings. He is frankly a materialist, and traces the "inferiority complexes" which are so common to some actual, physical inferiority in the structural makeup of the patient.

He is considered an expert in child psychology.

DR. BEVAN ASSAILED

The statement made by Dr. Arthur Dean Bevan before the conference on medical education and hospitals on February 14, that 99 percent of all prescriptions for whisky written by doctors are for bootlegging purposes, has called forth a storm of protest from individual physicians and from medical societies.

The Chicago Medical Society has passed resolutions recommending that the Illinois State Society investigate these charges and calling for Dr. Bevan's removal as Chairman of the Council on Medical Education and Hospitals of the A.M.A. Other Societies have taken more or less similar action.

A scathing editorial in the *Illinois Medical Journal for* March, 1927, castigates the doctor unmercifully, accusing him of "mud slinging", and characterizing him as

a traitor to his profession and his remarks as false and insulting.

This statement by Dr. Bevan was broadcasted through the newspapers all over the country, and was given a degree of weight by his official position in the American Medical Association.

Physicians all over the country should take steps to correct the false impression regarding the members of the medical profession which was conveyed by Dr. Bevan's ill-judged remarks.

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NORTHWESTERN UNIVERSITY MEDICAL SCHOOL

Chicago is rapidly taking its place as the medical center of the United States and here is one of the reasons.

The Medical School of Northwestern University is now housed in this beautiful and completely equipped Gothic sturcture of gray stone, overlooking Lake Michigan.

This school is a part of McKinlock Campus (the schools of law and commerce are shown in the background) and the New Passavant Hospital will soon arise nearby.

CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

Associate Bacteriologist (Medical)

Applications for associate bacteriologist (medical) must be on file with the Civil Service Commission at Washington, D. C., not later than May 10.

The examination is to fill a vacancy in the Hygienic Laboratory of the Public Health Service, Washington, D. C., at $3,600 a year, and vacancies occurring in positions requiring similar qualifications, at approximately the same rate of pay.

The duties are to perform independently or with associates or through subordinates, work of major importance in bacteriology.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience; and a thesis or publications on some subject connected with bacteriology, to be filed with the application.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the post office or custom house in any city.

VACCINE FOR "SPOTTED FEVER"

Surgeon General Hugh S. Cumming, of the U. S. Public Health Service, announces that, after 20 years' work, a vaccine has been prepared, which is prophylactic for "Rocky Mountain spotted fever", or "tick fever". This year 123 sheep herders in Idaho and Montana have been vaccinated and not one of them has contracted the disease.

In the course of this work, the lives of four medical officers have been sacrificed. If any men ever deserved a medal for heroism, it is these faithful workers, whose names are never known to the world, who give up their lives "in line of duty" to benefit humanity.

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